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ORIGINAL COMMUNICATIONS.

Southern versus Northern Practice. By B. RUSH MITCHELL, M. D.,
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Within a few years past, and more especially since the multiplication of Medical Schools in the South and West seemed to require its advocacy, the doctrine has been held, and diligently impressed upon the public mind, that there was a difference between Northern and Southern practice, so well defined and determined, that he who should attempt to treat disease in the South according to Northern dicta, must be almost uniformly unsuccessful; and so frequently have Southern writers and teachers asserted this dogma, so animated have they been in arguing its truth, that they have often, we doubt not, become convinced of that which was before to them only a speculative opinion.

Without pausing to notice the fact, that the first enunciation of the proposition we are considering was under the auspices of a Western Medical School, and urged as a reason for the attendance of medical students to its teachings, in preference to those of Eastern contemporaries; and that a majority of the teachers who supported the proposition were, themselves, the *alumni* of Eastern and Northern Medical Schools, it is sufficient for us to know, that the belief adverted to is now, and has been for some years, a

predominant article of the medical creed held by Southern and Western physicians. In truth, we ourselves, until within a few months past, have been accustomed to regard a graduate of a Northern or Eastern School as entirely incompetent to battle with and master Southern diseases; nor was it until the reverse became matter of demonstration, that we could believe otherwise. While, however, we repudiate in toto the slanders upon Northern physicians, it must be confessed that between the diseases of the Northern and Southern sections of our Union there are differences well marked and apparent. But that these differences, of themselves, constitute, as has been alleged, any reason why a well educated medical man from a Northern city cannot master them until he re-study his profession, is, in our judgment, wholly erroneous. This will be evident from a consideration of the differences themselves. These arrange themselves under four heads. First, the suddenness and intensity of invasion; secondly, the inaptitude of reaction; thirdly, the rapidity with which fatal or healthful terminations ensue; fourthly, the increased quantity of medicine not only tolerated but required. An attentive examination of these points of difference will, we think, at once demonstrate how groundless is the assumption of our Western and Southern medical friends. We grant that there *was* a time when their proposition might have been true; in those days, when physicians, versed in books only, and anxious only to name a disease that they might find from the books its treatment, were lost in a wilderness of conjecture when conflicting and strange symptoms were present; but at this day, when medical men rely upon principles in medicine and their multifarious application in the treatment of disease, it would seem strange that transference of residence should strip their principles of utility, or themselves of skill.

We hold, and justly, that if medicine be a science, the principles which it furnishes must be of universal application. Either a medical principle which obtains in the North must be equally valid in the South, or it is no principle at all. Principles recognize no degrees of latitude, no varieties of climate in their application; and he who understands both their nature and teaching aright enjoys an equally wide field of practice. To one well versed in the principles of medicine, it matters little whether the disease he is treating be under a snowy or a tropical sky; or by what name it may be called. These are matters of minor im-

portance. The grand questions he has to solve are,—what diseased manifestations are present ; what implication of organs do they indicate ; and having determined these, his principles will guide him to the correct practice.

Examine in this light the differences which we have enumerated as existing between Northern and Southern diseases ; and it will hardly be pretended that they constitute stumbling blocks to a *thoroughly* educated physician. Is a disease sudden and intense in its invasion,—he can ascertain that as easily as another, although he see the disease for the first time. Does reaction fail to come on,—he can perceive it as well as others. Does reaction come on slowly,—he can detect that also, and expedite its access. Are the tendencies of the disease to a speedily fatal or heathful issue,—these tendencies are not voiceless, and they will speak equally audibly to a Northern as to a Southern ear. In fact, all these differences are entirely *sensual*, their evidence is addressed to the eye ; and any medical man who can interpret signs and symptoms, can ascertain their indications, although he, a native of Greenland, were to find them in Louisiana.

The fourth difference, viz., in the quantity of medicine required, is the only one which appears to possess any element of deception or misdirection to the Northern physician. We say *appears*, for it really possesses nothing of the kind. It is self-evident that, if the physician has duly and attentively remarked the nature of the differences we have before noticed, they will, of themselves, indicate the necessity of a more energetic practice than that which he has been wont to employ. If he be a well educated physician, the sudden and violent onset of the disease, the want of reaction, and a marked tendency to a speedily fatal issue of the case before him, will indicate to his reason far more authoritatively than any other voice can speak, the necessity for prompt, energetic and decisive treatment. He decides, therefore, that a certain end must be attained within a given time ; he is satisfied that a certain remedy alone will answer his purpose ; and having arrived at these conclusions, *dose* becomes matter of small regard—effect is the object sought. That he may not carry his remedy far enough in his first case is readily admitted, but that he will fail in this particular in the second, is hardly probable.

In view of these reasons, then, we conclude that the proposition

of our Southern brethren is utterly untenable, as far as thoroughly instructed Northern physicians are concerned:—we say thoroughly instructed physicians, because we apprehend that the ignorance of many upon whom the title of Doctor has been conferred of late years has been the grand cause for our Southern friends so misjudging Northern medical men. So vast and so motley has been the concourse of aspirants for medical honours during the last ten years, and so numerous the rival schools of medicine, that it were indeed marvellous if, in the struggle of both, a great number of unworthy individuals have not been invested with the doctorate, nor that the standard of medical education being lowered, even the really deserving and studious have failed to be as well grounded as they should have been, in the principles of their profession.

It is not then to these, and such as these, that our Southern friends should point to establish their opinion. We doubt not that many of these have to re-learn, or rather begin to learn, ere they can practice successfully at the South; for so they would have to do anywhere. Let not our Southern brethren judge from such examples. Let them, however, inquire where the most successful practitioners of the tropics were educated; at what colleges the practitioners of India and the Isles derived that knowledge which has rendered them more successful than native born physicians. Let them ascertain in what section of the country the medical officers of the Navy were educated; and how it happens that they succeed so well in every clime. And let them say, too, why it was, that during the prevalence of epidemic yellow fever in the Gulf of Mexico last summer, when the treatment of the disease was in the hands of junior officers, most of whom had never seen a case, the Navy should have lost but *one in thirty* cases; whilst at Vera Cruz, in the army hospitals, where the sick were attended by veteran yellow fever practitioners, who were specially and for that reason appointed to that duty, the ratio of deaths was about *one in four*. These junior officers were the alumni of Northern schools; the cases they treated were in unacclimated subjects; the disease they knew only by description, yet they were thus successful. And if medical practice educed from medical principles was thus successful in yellow fever, we have a right to presume that it would not fail in other Southern diseases.

We conclude, then, that disease is an inroad upon life, varying in its mode of access, and in its expression, according to climatorial, local, or individual peculiarities; and that the physician who rightly understands and interprets its general history, will never be at a loss to appreciate its minor details or peculiarities, nor to address to each its appropriate means of removal. No one incapable of doing this merits the name of a physician; while to be fully competent to the task we believe to be within the grasp of every anxious, patient, and thoughtful student of medicine. Thus viewed, medicine is a world-wide science, and: whether her assistance be invoked North or South will be prompt, in scientific hands, to direct a proper treatment.

On Phthisis and other Diseases of Lima. By ARCHIBALD SMITH, M. D.

[For permission to copy the following interesting letter, (which, if not intended for publication by the author, is eminently worthy of it,) we are indebted to the kindness of Professor Dunglison. It gives a very different account of the liability to phthisis in Lima from what we have previously had; and furnishes additional proof, that mere uniformity of temperature of the most genial character does not afford that immunity from disease of the respiratory organs that we are accustomed to expect.—Ed.]

ROBLEY DUNGLISON, M. D., Jefferson College, Philadelphia:

Lima, 13th May, 1848.

Dear Sir,—It has been my good fortune, a few days ago, to have met with a recent edition of the *Cyclopædia of Practical Medicine*, revised with additions by you. In turning to the article *Climate*, of this admirable work, I was surprised to find it stated, at p. 449, vol. i., that “Dr. Burrough resided four years in Lima, and did not meet with a single unequivocal case of phthisis which originated there during that period; although scrofula was not uncommon.” Desirous to rectify the conclusions that may be drawn from this statement, put forth in a work of such high authority, and so ably revised as it is by you, I take the liberty to address to you this letter, in order that you should be put in possession of the *real fact*, that cases of *unequivocal phthisis* are not uncommon in Lima. How this prevalent disease could have

escaped the observation of Dr. Burrough I cannot imagine, except it may have been that his practice was chiefly confined to foreign residents.

I flatter myself that you will kindly forgive this liberty, persuaded that the zeal and talent with which you successfully labour to diffuse the facts and reasonings of that profession of which I have the honour to be a member, will not be offended by any contribution which I can offer regarding the climate or diseases of Lima, with which a long residence has rendered me familiar in every class and rank of its population.

This capital covers a great extent of surface, and is interspersed with extensive orchards and convent grounds, all well watered by aqueducts, but productive of malaria, which at certain seasons—especially the autumnal—spreads ague in every street. The lower part of the town is only two leagues from the sea, and but a few hundred feet above its level whilst the higher part is not quite a league from the nearest chain of mountains; and the suburbs are detached by the river Rimac, over which there is a bridge of communication, and flanked by the adjacent hills of San Cristoval and Amenciaes. Lima, thus situated between mountain and sea, and refreshed by a river, is free from the extremes of heat or cold. The temperature of the higher part of the city, which is skirted with orchards, is a few degrees cooler than that of the centre, near the cathedral and palace square. In the latter locality, during the dry season, the thermometer of Fahr. rarely rises above 80° — 82° , and in winter it seldom falls below 60° within doors. The ordinary difference of range between the night and day thermometer is from three to four degrees in airy apartments, with brick floors, open windows and verandas, such as are common in Lima and on the coast. The hygrometer—Leslie's—seldom exceeds 50 degrees in the dry season—from November to May—or descends below 12 to 15 degrees in the cooler and more humid wintry months—from May to October. The barometer may be specified within the narrow range $29\frac{9}{10}$ to $29\frac{1}{2}$. Rain is so rare as to be scarcely ever witnessed; for what is called the wet season in Lima and its environs is little more than a morning and evening haze, with a kind of Scotch mist or drizzle. The atmosphere of the coast appears to have little or no electricity. Thunder and lightning are, like hail, snow and sleet, unknown

in this bland atmosphere : on the Cordillera, indeed, these wars of the elements are prevalent during the wet season, when it rains in torrents ; but even in these Alpine regions it seldom rains before 2 P. M. On the Andes or Cordilleras, as on the coast, the seasons are properly divided into the wet and the dry. But the dry months of the mountains are the wet of the coast, and the wet season of the coast the dry on the mountains. On the coast, January, February, and March are the hottest of the dry months ; and June, July, and August the most foggy and drizzly of the wet season.

The inhabitants of Lima and its adjacent maritime valleys are, many of them, of white parentage, but more generally a mixed race of all grades between the Indian and African, as well as between the white and Indian, and the white and negro. The white infant is generally reared at the breast of the black nurse ; and is frequently passed from one to another, until the parents think that they have secured a proper one ; but with all the care and anxiety inseparable from such transitions, the white child is often tainted in its blood from its earliest infancy. The white mother is, in this fair, but deceitful, climate, so prone to *hæmoptysis and phthisis as a consequence of nursing*, that she is hardly ever able to suckle with impunity. But though in this respect the white parent is more tender than other women of inferior caste, yet delicacy of constitution is not confined to females of any class. Among all ranks of the community a general laxity and weakness of habit is prevalent. Errors of diet and education, with the entire neglect of medical police, may have much to do in developing the weakly physical character of these people ; yet independently of all such causes, there is a want of tone or energy inseparable from the climate itself, which affects not only man, but also, in a most remarkable degree, the dog species, soon depriving even the English bull-dog of his ferocity and vigour. In short, whatever the cause may be, the fact cannot be concealed, that the European soon degenerates in this climate ; and that the native, whether of European or African descent, shows an early predisposition, even in childhood, to habitual congestive diseases, such as hæmorrhoids ; blenorrhœa ; uterine, intestinal and pulmonary catarrh, which are too often precursory of dysenteries, cancer uteri, phthisis, asthma with disease of the heart and dropsy ; not to

mention gastric and other fevers consequent on a deranged state of the stomach, liver and bowels, besides the aggravating effects of the prevailing *malaria*, which always displays its influence when the general health is impaired by divers other diseases. In the autumnal season especially, convalescents from other acute diseases are very prone to ague in some form or other. Yet in spite of all such multifarious ills, the climate of Lima has ever been exempt from any great or sweepingly fatal epidemics. Typhoid symptoms are sometimes sporadic in certain cases of fever, but never contagious; and the yellow fever has never approached nearer than Guayaquil, on the equator—12 degrees north of Lima.

With regard to phthisis, when imported by sickly sojourners from Chili and other parts, it is true that such invalids seem to get better for a short time after their arrival in Lima; but the amendment is more in the feelings of the patient, soothed for a while by the comparative mildness of the air, and the out-door exercise which animates the sinking spirits, after the confinement and monotony of a sea voyage of greater or less duration. But the painful truth remains to be told, that though the organic lesions may thus be more or less modified, or arrested, for a time, especially during the summer months, yet the disease, in the long run, makes sure progress to its fatal termination. It is usual, in consultations on such exotic cases, for Lima physicians to recommend the patients to retire from the capital with the least possible delay.

Hæmoptysis is often symptomatic of simple pulmonary congestion in the fevers of the coast—especially among negroes—and of amenorrhœa among young females. But be its origin what it may, its appearance is always associated with the idea of phthisis; because most of the fatal cases of this destructive disease in Lima are attended with spitting of blood at some stage of their progress: hæmoptysis—one of the most prevalent disorders in Lima—is therefore looked upon by every Limenian as a precursory symptom of phthisis pulmonalis; and its fatal consequences are so well known to the physician, and so dreaded by all, that the patient who hopes to escape with his life is ordered to leave the warm and humid air of the coast for the more congenial air of some inland valley of the Andes, where every diversity and gradation

of temperature may be met with. The very warm and dry atmosphere of some inland valleys does not appear the most suitable, even though the *annual range* of the thermometer (Fahr.) be only from 66° to 72° , as, with little variation, is the case in the vale of Huanuco, between the Eastern and Western Cordilleras. Tarma and Canta, both about 10,000 feet above the level of the sea, and of a moderately humid temperature, at about 60° Fahr., are the favourite and approved haunts of hæmoptoic convalescents from Lima. Scrofula, in form of what the natives call "lamparones," or clusters of swelled glands in the neck, is a common disease among all castes, but more especially in a certain dark race of mulatto and negro parentage, very much employed as domestics, and from whose number nurses for the white children are often provided; though, when it can be done, the negress is always chosen, as it is imagined that her milk is less heating. The black cow's milk is also preferred on the same idea. By popular consent and phraseology all things eatable or drinkable are divided into cold and hot; but in the application of this fundamental principle of Spanish-American dietetics, very fatal vulgar errors are committed; and particularly in cases of incipient pulmonary disease, wherein they attribute all to "*ardor interior*," or an internal heat, which they offer to correct by *iced beverages*, sitting in draughts between open doors and windows, and exposing the chest and shoulders to the chilling action of such artificial currents of air—very often the cool night air!

In order to show the extent of mortality in Lima, and the relative proportion of fatal diseases, I shall subjoin an authentic Table of Mortality, from the official reports of the public cemetery or Pantheon of Lima, during the five years 1842 to 1846. This Table, however, does not include English or Americans *not* Roman Catholics, who have a burying place of their own near the seaport of Callao—two leagues from the capital.

It may be interesting to premise that the whole population of Lima, by the latest census made about ten years ago, did not quite reach 56,000; but that, allowing for the great influx of foreigners, and even native families from remote provinces, during the last ten or twelve years, the present number may be computed at 60,000, or thereabouts, which it is well to bear in mind when considering the great annual mortality in the Table.

Diseases.	Total of the Five Years.	Average of.
Dysentery,	2381	476 $\frac{1}{2}$
Fevers,	2547	509 $\frac{3}{4}$
Tabardillo or low nervous fever,	363	72 $\frac{1}{2}$
Phthisis,	1548	309 $\frac{1}{2}$
Pleurisy and pneumonia,	774	154 $\frac{4}{5}$
Dropsy,	520	
Cholera morbus,	8	1 $\frac{3}{4}$
Malignant pustule,	2	$\frac{2}{3}$
Small pox,	118	23 $\frac{1}{3}$
Convulsive cough,	22	4 $\frac{2}{3}$
Sudden deaths,	206	41 $\frac{1}{2}$
"Fusilados" or shot,	11	2 $\frac{1}{2}$
Various diseases,	7280	1456
	<hr/> 15780	<hr/> 3156*

Remarks.—Suppose the population of Lima 60,000, and the deaths in the same 3156 yearly, it appears that in less than twenty years a number equal to that of the whole population is carried off by ordinary diseases.

The great amount of deaths under "Various Diseases" not only includes a large proportion of fatal infantile diseases—especially dentition—which occur in private families, but also of the poor who die in hospital, and whose diseases are not regularly specified in the returns of the Administrator of the Public Cemetery, as are those of such as die in private houses, and have to be duly reported by the parochial curates; who, for special reasons, are very attentive to the discharge of this duty.

Now, in reference to consumption or phthisis pulmonalis, (so prevalent among the poor in hospital during the spring and autumn months,) were the fatal cases distinctly recorded instead of being indiscriminately huddled under the head of "*Various Diseases*," the mortality from phthisis would be seen to exceed very considerably the numbers stated in the above Table of Lima Mortality. And it is of great moment to state explicitly in this place, that of at least thirty-eight or forty dissections lately made in hospital of those patients who have died with the ordinary symptoms of phthisis—(such as cough, purulent expectoration, and

* The year 1847 exceeded this average: the deaths were 3400—small pox prevalent. [Some interesting observations on the same subject are contained in Tschudi's "Travels in Peru during the Years 1838—1842." New York, 1847. Ed.]

colliquative sweats or diarrhœas, with hectic fever, &c.) all have, on inspection, presented the lungs in a highly tuberculated condition—in some instances all over studded with tubercles.

Under the head "Convulsive Cough" are included suffocative catarrh and croup. The latter is not a common disease; but last week I attended, in consultation, a case of angina membranacea, which was complicated with secondary croup, clogging the air tubes by ropy mucous secretion, and false membranes, of which pieces were ejected by coughing. It proved fatal on the eighteenth day from the invasion of the angina. During the hot months, when the irritability of the whole system is greatly increased on the coast, the mucous membrane of the stomach and bowels becomes readily affected, and cholera morbus is a common result; but as this disease is almost always cured with ice, the deaths, as above, are few.

For a further account of Peru and its diseases permit me to refer to "Peru as it is," published by Bentley, London, 1839, in which I would particularly refer to the Chapter on Limenian Dietetics, in Vol. I.; and likewise to what I have written, entitled "Practical Observations on the Diseases of Peru, described as they occur on the coast, and in the Sierra," in the Edin. Med. and Surg. Journal, in successive papers—to be seen in No. 143, 144, 145, 148, 149, 151, 152. And asking your indulgence for so long and crammed a letter,

With the highest consideration and respect,

Allow me to be your very obedient servant

And well wisher,

ARCHIBALD SMITH.

An Essay on Pyelitis Calculosa, or Stone in the Kidney. Translated from the French of P. Rayer, Physician to the Hospital de la Charité, &c., &c., &c.—with notes and additional cases. By JAMES BRYAN, M. D., of Philadelphia, Member of the American Medical Association, Professor of Surgery in Geneva Medical College, N. Y., &c., &c.

Pyelitis, (from *πυελος* pelvis,) or inflammation of the pelvis and calices of the kidney, is a disease distinct from nephritis proper,

not only in its seat and anatomical characters, but also in its symptoms and accompanying conditions.

Pyelitis is sometimes acute, but more frequently chronic; it may be divided into several distinct species, according to the character of the inflammation, or the nature of the causes which produce it. (Pyelitis simplex, P. calculosa; P. blennorrhagica, and P. gangrenosa.)

It may attack the whole or a part of one pelvis, or of both, or only one or more calices.

General Characters.—The following alterations occur in acute pyelitis.

The mucous membrane of the pelvis and of the calices is more or less injected—this membrane presents a general redness, from a vascular network, formed by a large number of vessels, invisible in a healthy condition.

At other times red spots are seen on the membrane, formed by a mesh of small vessels almost invisible to the naked eye.

These vascular spots are sometimes very small, and then appear like red points disseminated over the mucous membrane. Besides these, small petechiæ are sometimes seen like true ecchymosis; at other times a quantity of coagulated blood, alone or mixed with urine, is found in the pelvis and calices. These petechiæ, ecchymosis or deposits of blood, are observed, particularly in gangrenous pyelo-nephritis, produced by morbid poisons, as variola or malignant scarlatina, either petechial or hæmorrhagic.

In acute inflammation of the pelvis we occasionally find the internal surface of the mucous membrane deeply injected, covered here and there with partial deposits of pseudo-membrane, more or less adherent, of a whitish or greyish color.

In the acute form of inflammation of the pelvis, the mucous membrane is not much thickened; there is not much contraction either of the orifices of the pelvis, or of its interior, or of the mouth of the ureter; while in pseudo-membranous acute pyelitis, these orifices may be contracted or entirely closed.

When an acute pyelitis follows a retention of urine, the pelvis and calices are always more or less dilated, and the cones, to some extent, absorbed. This dilatation of the pelvis and of the calices, with diminution of the cones, is particularly obvious in chronic pyelitis.

Softening, ulceration and perforation of the pelvis have been observed only in rare cases of calculous pyelitis, become acute, or in pyelitis originally gangrenous.

The submucous tissue of the pelvis and of the calices is sometimes infiltrated with serosity or pus, in severe acute pyelitis: the renal tissues then present inflammatory lesions.

In acute pyelitis, the urine in the pelvis and the calices, is always mixed with a quantity of purulent mucus or pus, or even blood. When the mucus, pus or blood is not visible with the naked eye, we may detect, by means of the microscope, globules of pus and those of blood. In reference to the chemical and physical properties of the urine, they are not all alike in the various forms of pyelitis; sometimes the urine contains the urates, in amorphous powder, sometimes uric acid crystals, sometimes crystals of an amoniaco-magnesian phosphate, or finally, albumen.

The most common appearance of the mucous membrane of the pelvis in chronic pyelitis, old and well marked, is the tint, either general or partial, of a dead white. The redness seen in some chronic cases is never so decided as that seen in acute cases; the vascular interlacement is not so distinct, but the principal vessels of which it is composed appear frequently large, and as though varicose.

The veins which course over the exterior of the kidney, sometimes attain a great size, and form large rolls around the pelvis and ureter.

The mucous membrane of the pelvis and of the calices presents often, to a greater or lesser extent, a brownish red tint, and the vessels which pass along the surface appear of a decidedly sooty color.

In very old chronic pyelitis, it is not uncommon to observe in the pelvis, a number of grey or redish patches.

In chronic pyelitis, with enlargement of the pelvis and calices, by pus or purulent urine, the pelvis and the species of pouches formed by the dilated calices, are, on the internal surface, of a dead white, very different from the bluish white semitransparent tint, natural to the parts. The mucous membrane, somewhat thickened, does not exhibit vessels on either surface.

The thickening of the mucous membrane is sometimes so great that the orifices from the calices to the pelvis are extremely

contracted ; these openings are sometimes changed into fibrous cords.

I have sometimes observed, in chronic pyelitis, and less frequently in acute pyelitis, on the inflamed surface of the mucous membrane, a transparent vesicular eruption, the size of a pin's head, containing an aqueous fluid ; this is seen also under other circumstances.

The result of ulceration of the pelvis and calices may be, the destruction of the surface or substance of these parietes, in one or more places, as when gangrene attacks them. *Fistulæ renales* are then established, which communicate with the sub-peritoneal cellular tissue with the cavity of the peritoneum, with the large intestine or duodenum, &c. The infiltrated urine produces either perineal inflammation, peritonitis, vomiting of urine, or is discharged per anum mixed with pus.

These accidents may occur without any true dilatation of the calices or pelvis, or preternatural enlargement of the kidneys. Nevertheless, it is only generally after atrophy of the substance of the kidney, and the alteration of the pelvis and calices into a multilocular pouch, filled with purulent pus, that *fistulæ renales* are established.

Ulceration of the pelvis and calices may cicatrize. Some cicatrices appear as simple irregular depressions of the surface, of a greyish colour, which may be covered by a pin's head ; others of greater size are of a dead white or pearl (*nacré*) colour, and exhibit depressions and salient lines converging or stellated.

In chronic pyelitis, with obstruction to the passage of the urine, the pelvis and calices become dilated, and the substance of the kidney becomes atrophied. Becoming more and more distended, the pelvis and calices are finally transformed into a multilocular pouch, whose subdivisions communicate with each other through the pelvis, sometimes very much dilated. The relations of this pouch with the neighbouring organs, vary according to its dimensions. The right kidney dilated, may push the liver towards the chest, and become adherent to it ; the pus or purulent urine in the renal pouch may be directed to the liver, through one or more openings under this organ, and in this way, be forced into an abscess of the liver, or even one of the bronchi. Communications may be made with the duodenum. Below, it may pass behind the coecum or extend to the crural arch. In

some cases the dimensions of these pouches may be accurately made out by the aid of the touch, and by percussion.

When inflammation attacks the pelvis and calices of the left kidney, it may be dilated upwards, contract adhesions with the under surface of the diaphragm, at the same time the superior surface of this muscle may contract adhesions with the base of the lung. In such cases the purulent urine and pus from the left kidney is discharged by expectoration.

The contents of the pelvis commonly spread in another direction; the pouch is perforated in its back part, and gives passage to the purulent urine and pus into the extraperitoneal cellular tissue, when they find their way to the crural arch, and very frequently form an urinary abscess in the lumbar region. When these urinary and purulent collections take place, should peritoneal or other inflammation of neighbouring organs, which hastens death, not set in, one or more fistulæ will be established in the lumbar region, or they may open into the colon.

The contents of the pelvis and calices may be arranged as follows:—

1st. Muddy urine, with more or less mucus. Allowed to stand, it throws down a sediment, composed in a great measure of matter, which presents under the microscope a large number of mucous or pus globules, while it has the general aspect of a semi-transparent jelly.

2d. Pus mixed in greater or lesser quantity with urine, and sometimes with blood almost without a trace of urine. It is more or less flocculent or glairy, and becomes very alkaline by putrefaction or the developement of ammonia.

In other cases the pus, from long retention in the pelvis and calices, is changed into a milky or yellowish substance, of the consistence of soft cheese. If, after retaining this substance in water, we examine it with the microscope, purulent globules will be seen in small numbers, with a much greater quantity of granules, which are probably a species of detritus from the pus globules.

3d. Blood, or several of its elements in variable proportions. In some cases the microscope detects the existence of blood globules, where the presence of blood is not obvious to the naked eye.

4th. Calculi, whose forms are moulded by that of the containing cavities: they exhibit branches, and are nearly all terminated by an enlargement. The largest portion of these calculi is nearly always situated in the cavity of the pelvis.

5th. The cavity of the pelvis may also contain sand or gravel, generally loose, and suspended in pus or purulent urine: this sand sometimes forms deposits on the internal surface of the renal pouch, in the form of incrustations, which are generally phosphatic. These saline matters form also with pus, mucus or altered blood, a kind of dark mixture, covering the calculi and the parietes of the pouch.

6th. In other cases, the dilated cavities of the pelvis and calices, contain a whitish solution, which is composed chiefly of amorphous saline matter (phosphate of lime) mixed with animal matter. In one case, Brande found that this whitish solution was composed of nearly pure carbonate of lime. When this white substance is boiled, it immediately blackens, and the residue when incinerated in contact with air, presents a white colour.

7th. Other foreign bodies, acephalocysts, worms, &c., sometimes exist, but much less frequently than calculi in the cavity of the dilated and inflamed pelvis.

In chronic pyelitis the cortical and tubular substances are sometimes inflamed.

In consequence of the accumulation of pus, or of purulent urine in the pelvis and calices, the renal tissues become atrophied, which may be the case with one or both organs, so that the kidney appears to be transformed into a membranous pouch, on which may be seen small portions of the cortical substance. These are the cases which have been considered as throwing out pus from ulceration of the kidneys.

Finally, chronic pyelitis may produce another form of renal atrophy. The kidney of an adult, while preserving its natural form, may be reduced to a size less than that of a new born infant; while the dilated pelvis presents the characters of chronic pyelitis, particularly a considerable thickening of its membranes.

Pyelitis may be produced by a cancerous affection of the kidney, or may co-exist with it. It sometimes accompanies tubercular degeneration. In such cases, after removing by

washing, the purulent matter, mixed or not with tubercular detritus, deposited in the pelvis or the calices, there remains a quantity of tubercular matter, adherent to the mucous membrane of these ducts which is frequently ulcerated at several points.

It is rare that an individual dying of pyelitis, chronic or acute, does not present other changes in the urinary passages. In pyelitis there are lesions of the bladder, the urethra, the prostate, and both pelves are almost always affected; but generally there is a remarkable difference in the condition of the two excretory ducts. The alteration is always older or greater in one than the other, without it being possible in a majority of cases to assign the cause of the difference. In the cases of calculous pyelitis, one of the kidneys is greatly changed, while the other, with its excretory duct, is healthy, but hypertrophied.

In reference to lesions of other parts of the body, peritonitis (whether there be perforation of the calices and pelvis or not) is of all consecutive lesions the most common. Inflammations of the large intestine are also very frequent in the latter stages of the disease.

We also see pleurisies, bronchitis, and hepatitis supervene.

Serious alterations of the brain or its membranes are rarely seen, though occasionally cerebral symptoms do occur in the last stages. The developement of these symptoms seems to be due to an alteration in the blood, consequent to the derangement of the urinary secretion.

Special Characteristics.—The symptoms of pyelitis, and the accidents more or less varied, which it presents in its progress, either in its acute or chronic state, are so directly and intimately connected with the cause of the inflammation of the pelvis and calices, that practically, it is necessary always to understand the different kinds of inflammation. Now, pyelitis may be arranged into two classes, very distinct. The first comprises those cases of inflammation *induced by foreign bodies*, by one or more calculi, by worms, by acephalocysts, or by retention of urine. In the second class I arrange all those cases of inflammation of the pelvis and the calices, independent of the presence of a foreign body appreciable to the senses; such as the pyelitis following specific inflammations of the urethra and bladder; such also as inflammation produced by the absorption of cantharides, and those, much

more serious, which frequently terminate in gangrene, and sometimes supervene on pestilential (*charbonneuses*) diseases, or in cases of purulent absorption in parturient females. Doubtless the diseases in this last group are very different from each other both in their nature and degrees of severity. In placing them in one group, I have desired only to separate them from the diseases produced by foreign bodies.

Pyelitis from Foreign Bodies.

Of all the forms of pyelitis, the most interesting, without doubt, is that produced by calculi, (*nephritis calculosa*, of authors.)

Pyelitis Calculosa.

Sand and calculi of different kinds, contained in the pelvis and calices, are the causes of this inflammation.

In opening the bodies of individuals who have died of other diseases than those of the urinary organs, who have presented, in addition to the symptoms of the principal affection, those of acute pyelitis, (pain in the region of the kidneys, one or both, with the excretion of urine surcharged with mucus, without lesion of the bladder or urethra,) I have several times found in the calices and in the pelvis decidedly enlarged, with the walls red and vascular, a fine sand, generally of a reddish yellow colour.

Ordinarily, when the sand is thus deposited in these passages, there exists one or more little calculi, either in the pelvis or in a calix, or in the ureter, whose cavity they contract and obliterate.

At other times, (especially in cases where, during life, symptoms of chronic pyelitis have been observed) instead of urinary sand, we find in the pelvis a white amorphous deposit, similar to the chalky sediment of standing water, and which very often is composed of phosphate of lime. This substance is sometimes so abundant as to fill, with a small quantity of pus, the distended pelvis. In this case the calculus found in the passages is nearly always composed of an ammoniacal-phosphate, and of phosphate of lime.

The small agglomerated crystals, or amorphous matter, more or less dense and insoluble, found in the calices pelvis or ureter, are the frequent cause of pyelitis. Most generally these gravel are irregularly rounded, presenting two facets on which they easily lie, when placed on a moderately inclined plane. Sometimes these gravel appear composed of several nodules. At other times

they are stuck together, as if with varnish, or they are irregular and roughened by numerous crystalline asperities, sensible to the finger and visible to the naked eye, or a magnifying glass. When examined with a microscope of moderate strength, these asperities are found to be composed of small crystals. These gravel stones are found nearly always to be composed, when they are yellowish, of uric acid, and when white, greyish or shining, of an ammoniaco-magnesian phosphate. The larger stones are generally found to be composed of ammoniaco-magnesian phosphate, or of oxalate of lime, or of uric calculi encrusted with these salts. The gravel stones of cystine are yellow, and slightly transparent.

In chronic pyelitis the stones, or at least their external layers, are often composed of phosphate of lime, or of the ammoniaco-magnesian phosphate, or of these two salts united, when the urine is alkaline.

The brown gravel, or the greyish brown, are often composed of oxalate of lime, coloured with blood or other animal matter.

The other physical properties of gravel are very variable, even in the same species. Thus, the gravel of uric acid is often formed of so slightly agglomerated crystals, that a little firm pressure will break them; the centre of these gravel is softer and less compact than their circumference. At other times these same gravel are very solid, and after a blow made with care, a number of concentric layers, composed often of a material more or less pure, tinted more or less deeply, may be observed. When those layers have different compositions, the nucleus is nearly always composed of uric acid, and the outer layers of amorphous crystalline phosphates. We sometimes find these layers alternating, of uric acid and of phosphates. We also observe, but rarely, the nucleus of these gravel composed of a clot of altered blood, or of oxalate of lime.

Renal calculi, like the gravel, may occupy the calices, the pelvis, or the neck of the ureter. These calculi present a great variety, in size, form and colour.

The small calculi found in the calices are generally round or oval; one extremity is often larger than the other. Frequently polished and shiny on their surfaces; renal calculi may also present inequalities and prolongations like apophyses.

In proportion as the renal calculi increase in volume, and the

calices dilate, the tubular substance is flattened against the calculi, and it may be seen from without what part is thinner or thicker in proportion to the projection of the calculus. The extremity of the calculus applied to the cones is flattened, and presents sometimes several facets, which form with each other obtuse angles. These facets are often beveled with a sort of border, and have a neck-like contraction, corresponding to the extremity of the calix. These facets, generally slightly convex, are sometimes irregularly concave; when they are early adapted to the convexity of the conical substance, not yet absorbed.

Once a calculus begins to grow in a calix, it is almost impossible that it should pass into the pelvis, and it will continue to grow. When several cones are included in one calix, the calculus, nearly always increasing in size and obstructing the free course of the urine, compresses the cones, and presents enlargements, which correspond with the depressions in the cones. These tuberosities of the renal calculi are supported by a contraction of the neck; this terminates by a species of queue which projects into the pelvis.

In proportion as a calix distends, it becomes filled with calculous matter or urine; other calices from the same cause are affected in their turn. The compression made on a calix by a calculus in a neighbouring calix, sometimes contributes to the formation of another calculus: the latter being formed in the second calix, the little prolongations or queues touch each other and become united in the pelvis. Generally there are but two calculi thus united: in other cases a greater number become united and form a mass in the pelvis. These calculi have mostly a rounded pedicle, sometimes flat, by which they unite, at right angles, or at angles more or less acute two or three heads which present sometimes a striking analogy to certain bones of animals. We observe also calculi of two calices, placed one opposite the other, uniting in a different manner; the prolongations which are sent into the pelvis unite and leave no appearance of queue in the pelvis. These calculi can never be macerated during life, and it is with difficulty that they can be extracted after death by cutting the indurated and atrophied renal tissue; they are sometimes broken at the necks embraced by the thickened calices.

Finally, it sometimes happens that the pelvis itself is filled with

a calculus, uniting itself with others in the calices, forming an irregular mass, differing in shape according to the positions of the calices affected.

Sometimes there is a conical prolongation pointing downwards, on which is attached, at right angles, a branch or appendix as large as the other branch of the calculus. On the extremity of this appendix there are observed facets, more or less numerous, like those described as formed in the neck of the ureter.

At other times, instead of presenting one prolongation, the calculi of the pelvis extend into one or several calices, and assume a very surprising appearance; similar to coral, buck's horns, &c. In all these cases one portion of the calculus, whose dimensions are generally greater than any other individual part, is placed in a vertical position. This, which occupies the pelvis and the commencement of the ureter, frequently exhibits a kind of gutter or canal excavated in its substance. Sometimes this portion of the calculus, placed in the entrance of the ureter, is perforated, as if to permit more readily the passage of the urine from the inflamed pelvis.

This portion of the calculus is sometimes so regularly cylindrical as to have no perceptible depression, at other times it presents a well marked depression, corresponding to the exit of the pelvis. The ureter at this point is nearly always dilated, so much so as to be greater than the pelvis itself.

Sometimes the corresponding extremities of the calculi in the pelvis and in the calices, although contiguous, are not united, but rub against each other: the convex extremity of the one being lodged on the concave surface of the other.

Finally, when renal calculi acquire great dimensions and weigh several ounces, they become less branched than when smaller. The renal substance becomes more and more atrophied without dilatation, the kidney assumes the form of an irregular pouch, which is entirely filled with calculus.

The calculi contained in the ureter are generally small, elongated and irregularly cylindrical. They often obstruct the passage of the urine more completely than larger ones in the pelvis. The exterior of these calculi is often black.

The structure and chemical composition of renal calculi are very various. In general they always present irregular, concen-

tric layers. Sometimes one part of a calculus has a composition just the opposite to that of another part of the same calculus. The internal layer or nucleus is often composed of uric acid; the phosphates form commonly the external layers of moderate sized calculi.

Phosphatic calculi are often friable, and present canals or interstices in their interior.

I have spoken in another part of this work of the *causes* of renal calculi; for the present I would merely say, that, on one side the uric or gouty diathesis, and on the other, the different inflammations of the urinary passages, of the urethra, of the prostate, or bladder, which are easily extended to the kidneys, are the most common causes of *pyelitis calculosa*.

Pyelitis calculosa has been observed at all ages; in the foetus,* in children,† in adults, and old persons: but more frequently at an advanced age than at any other period of life. It is said that the left kidney is more frequently affected than the right: I am not entirely convinced of this.‡

* Pierre Frank says that a Dutch physician found renal calculi in foetuses of five and six months (Epitome, trad. Franç. t. v., p. 473, *Rétentions hétérogènes*); and adds that one of his predecessors, in the Academy of Göttingen, reports the history of two infants, one aged two days and the other eight, who died in convulsions while passing small calculi. Walther (Journ. de Graefe, t. i. p. 407) found small calculi in the kidneys of a foetus of eight months.

† Löseke (Obs. Anat. Chirur. Med. nov. et rarior, p. 30) found a renal calculus in a new born infant. Riedlin (Lineæ. Medicæ, 1694, Obs. XXX. p. 312) also found a calculus in an infant about a year old. Dr. Prael, of Brunswick, found several calculi in both kidneys of a female child of six months, (Bulletin de Ferrussac, t. x. p. 328.) Harder (cited by Lieulaud, Hist. Med. t. i. c. 271) mentions an infant of three months who suffered symptoms of nephritis: it died at two years of age, when a large quantity of sand was found in the left kidney, and a calculus in the mouth of the ureter. M. Wackenroder (Neue Jahrbuecher der Chemie und Pharmacie, B. VIII., S. 407: B. IX. S. 7 et 67) analysed a calculus found in the kidney of a seven weeks foetus. We read in the Ephemerides des Curieux de la nature, t. iv., p. 544) that renal calculi were found in an infant of thirty weeks.

‡ Boerhaave (Praelectiones ad instit. p. 252) thinks, that when but one kidney is affected, it is generally the left one. Charles Lepois (Obs. de Morbis a seros. Colluvio, t. iv. c. 2, Obs. c.) says, that of a hundred subjects affected with nephritis calculosa, more than four-twentieths have the left kidney affected; a proportion which appears much exaggerated. Hoffman

The deposit and aggregation of salts in the calices and pelvis are rendered easier not only from certain constitutions of the urine, but also by the accidental presence in this fluid, of foreign animal matters, such as blood, mucus, pus, &c. Thus pyelitis is seen to occur after wounds of the pelvis, blows on the lumbar region, or after powerful contractions of the muscles of the lumbar region, &c.

Calculi (and under this name I include all gravel) may occupy one or more calices without being united, and without presenting any obstacle to the passage of the urine into the ureter: in this case, inflammation is generally seated in parts contiguous to the calculi. While, on the contrary, calculi composed of several branches, occupy both calices and pelves, and obstruct the passage of the urine.

When the renal calculus, situated in the vicinity of the commencement of the ureter, presents a depression, urine and the materials secreted by the inflamed mucous membrane can with greater facility pass through the ureter to the bladder; and the kidney preserves its ordinary dimensions, or at least is not materially enlarged. If the calculus is situated in the entrance of the pelvis or in the ureter, at a greater or lesser distance from its opening, and obstructs it completely, pyelitis is often general, and all that portion of the ureter situated above the obstruction is more or less inflamed and distended with urine mixed with mucus, pus, or blood. There is then a considerable enlargement of the kidney, especially when the disease has existed some months.

The symptoms vary with these several conditions of calculi or gravel.

Symptoms.—When gravel or small calculi pass from the calices

(F.) Med. Ration., t. iv., p. 1, sect. 3, cap. 8. S. 7, de febre nephritica) Morgagni (de sed. et causis morb. Epist XL. art. 13,) P. Frank, (Traité de Médecine pratique, trad. Franç. de Goudareau, tom. v. p. 474,) Hiesewetter (de lithiasi sinistro quam dextro reni magis infestâ, Halle, 1876,) Earle (Med Trans., t. xi., p. 216, 217 et 27,) Richter (Speciale Therapie, t. iv. p. 483,) Haller (Elementa Physiologiæ, t. vii. p. 368,) Voigtel (Path. anat, 13. iii., S. 188 et 207,) have also thought that the left kidney was more frequently affected than the right. (Coyer pretends on the contrary, (extern. et intern. princip., etc. observationesque variæ., Obs. xxiii. S. 3,) that the right kidney is most frequently affected. I repeat that my mind is not made up, the numbers reported not being enough to form a conclusion upon.

into the pelvis, and from the latter into the ureter, and afterwards into the bladder; the patients suffer ordinarily more or less sharp, and sometimes very acute pains; even before any inflammatory action has been set up. But if a calculus is too large to pass into the ureter, or from the latter into the bladder, it causes derangements, which, in proportion to their acute or chronic characters, present four principal stages.

First Stage. (Nephritic colic with suppression of Urine.)—Acute pain, sharp or pungent in the region of the kidney affected, descending to the bladder, and sometimes accompanied with a chill of greater or lesser intensity. Urine scanty, and passed drop by drop, with a sensation of burning, sometimes with small pieces of gravel and a little blood.

The pulse small, depressed, afterwards frequent and full, generally after vomiting once or more, and a feeling of fainting. If the gravel is not expelled the next day or the following days, the greater part of these symptoms continue; and if the calculus does not entirely obstruct the urine, there is always discharged a quantity of blood and mucus. In cooling, the mucus appears in the urine under the form of soft flakes, like pieces of cotton which are afterwards deposited at the bottom of the vessel. The blood globules, easily distinguished by the microscope, form a light layer on the surface on the sediment.

These first symptoms may cease immediately on the passage of the calculus into the bladder, the urine which had been temporarily charged with blood or mucus, becomes natural, if it be not mixed with pus or mucus in passing through the ureter or bladder.

Second Stage.—(Mucous urine.) If, on the contrary, one or more calculi, even small ones, remain in the pelvis or calices, the inflammation, combated or not by art, passes almost inevitably into the chronic state. In this state the pain is not so acute as at first, patients complain only of a sense of weight in the region of the affected kidney. Later, the pain, sometimes none, most commonly dull, may become suddenly very acute, after an effort at motion of the body. It is sometimes worse after a meal; it is increased by the jolting of riding on horseback or in a carriage; slight pressure will often induce or increase it. It gradually decreases, and disappears when the patient lies on his side: it sometimes extends in the direction of the ureter, and even to the

testicle, and the corresponding thigh and leg, which becomes tumified.

These deep pains, habitual and often independent of febrile action, are sometimes replaced by acute pains, accompanied by other phenomena peculiar to the *exacerbations* of the chronic affections. These pains, sometimes analogous to those of nephritic colic, extend often along the course of the ureter, with retraction of the testicle and swelling of the thigh on the same side. In these exacerbations, blood is discharged with the urine, becoming red and coagulable by heat.

The urine less red than in the first stage, nearly always contains, at least in some discharges, a considerable quantity of mucus, which is deposited on cooling and standing.

Occasionally the urine is bloody, at other times perfectly clear, especially after free imbibition of watery fluids. These different appearances of the urine may sometimes be observed in the same person in the space of twenty-four hours. By cooling, different matters, uric acid or salts, are deposited with the mucus; blood and mucus are often on the surface of the sediment.

Lying on the abdomen or on the side opposite to the diseased, when one kidney alone is affected, standing, the effort at stool, coughing, sneezing, a deep inspiration, &c., and sometimes the heat of the bed, increase the pain in the kidney. Again, this pain may be very slight, even when there is one or more calculi in the calices or pelvis.

When the gravel which produces these symptoms is composed of uric acid, (and this is most commonly the case,) the urine is acid, and the sediment presents rhomboid crystals of a reddish yellow. Filtered, it becomes slightly muddy when nitric acid is added; this precipitates a quantity of uric acid or albumen, mixed or not with globules of blood.

When the gravel is phosphatic, the urine alkaline and mixed, at the moment of emission, soon becomes clear by the addition of nitric acid, and again cloudy on the addition of an excess of this acid, if it contains albumen, or blood, or pus.

Third Stage.—(Purulent secretion, without a renal tumour.)

To the two first stages mentioned, a third succeeds, more serious, when one or more calculi are retained in the pelvis or calices:—irregular chills, which increase towards evening, and

are frequently renewed, especially after a meal. Patients suffer in the region of the kidneys with various other morbid sensations, sometimes of cold, which extends down the corresponding member.

The urine, sometimes bloody, more frequently whitish and troubled, deposits, on standing, a purulent sediment, a milky white or slightly green compound, chiefly of pus or of salts precipitated from the urine.

A discharge of blood is sometimes the first striking symptom of the disease, especially when the pelves of both kidneys contain calculi; afterwards the urine becomes troubled and purulent, is discharged frequently and in small quantities at a time; occasionally the patients get better, the urine continuing purulent, with or without a mixture of gravel.

Finally, at periods of longer or shorter duration, patients suffer exacerbations, characterised chiefly by increase of pain in the renal region, by the diminution or suppression of the secretion of urine, a disposition to vomit, vomiting, fever, dryness of the tongue, &c. When death is about to occur, the vomiting persists, the pulse becomes more and more feeble, and the limbs become cold. The cessation of vomiting, diminution of pain and of the prostration, with the re-establishment of the urinary secretion, indicate on the other hand a species of convalescence; but these symptoms will inevitably occur again and terminate in death.

Fourth Stage.—(Purulent urine and renal tumour.) The fourth stage is characterized by a tumour (when one kidney is alone affected) in the lumbar region, generally projecting and fluctuating, produced by the accumulation of pus in the pelvis and distended calices. The tumour situated in one of the loins corresponds (when it is in the right side) in its superior part with the inferior extremity of the kidney, under which it is formed. When the tumour has acquired considerable size, its inferior portion may extend to the crest of the ilium, or to the iliac fossa or hypogastrium.

We have seen tumours formed in the pelvis and dilated calices filled with purulent matters, which weighed from ten to sixteen pounds.

In consequence of the developement of these tumours, the lumbar region becomes deformed and enlarged on the diseased side. This enlargement, sensible to the first glance of the eye, in the greater

number of cases, may be easily observed by comparing the size of the loin (indicated on each side by a line drawn from the vertebral column to the extreme limit of the trunk) with that of the other side.

By percussion the tumour yields a flat sound, behind, and nearly always in front, if the colon situated before and within the pouch on the right side, and behind on the left side, be not distended by gas. When the transverse colon separates, at least to a certain extent, the superior extremity from the edge of the liver, (when it is not yet very large,) its limits may be defined by the touch and by percussion; but when the tumour is large, the transverse colon being doubled and pressed downwards, the tumour having contracted adhesion with the inferior surface of the liver, it then becomes continuous with the liver, which it simulates, or resembles when it is enlarged or contains cysts.

When the renal tumour has acquired a certain size, it appears nearly always nodulated, and composed of several lobes. In this condition fluctuation is perceptible, and it is easy to decide that the tumour is composed of a pouch distended with a fluid.

The pain is never acute in the fourth stage in the intervals of the exacerbations; but it is increased by the pressure of the clothes, or that of the hand applied over the region of the kidney.

The pain is easily produced when, after placing one hand on the anterior surface of the tumour, we press forward with the other applied to the lumbar region. Sometimes pressure from behind diminishes the pain, while that in front increases it. Walking increases the pain, especially when it is rapid, and accompanied with certain movements of the body. Some patients have said that they were conscious of the motion of stones in the distended kidney, and physicians speak of perceiving a peculiar feeling and rubbing in the tumour when pressed upon by the hand.

In the fourth stage the urine is bloody or purulent at every emission, especially when the urine comes from the diseased kidney. The urine is more frequently purulent than bloody; it is only generally in the exacerbations.

At the same time great variations are observed in the physical and chemical properties of the urine emitted. When purulent urine, coming from the inflamed pelvis, being but imperfectly retained in that cavity, it is mixed in variable proportions with

the urine of the kidney. This fluid presents in the same day very different appearances, so that in confining ourselves to the examination of one or two emissions, we are liable to great error. I have sometimes seen, in calculous pyelitis, the urine discharged at a particular hour of the day, filled with blood or pus; and at another period in the same patient it would be quite natural; this can only be explained by supposing that the urine comes alternately into the bladder from the diseased and from the healthy kidney. We should always be on our guard in this respect, and not be deceived by a single examination of the urine in the twenty-four hours.

I have already stated that the urine is coagulable by heat and nitric acid, when it contains a certain quantity of pus, but the amount of the albuminous coagulum is not in proportion to the amount of pus mixed with the urine. In certain cases of calculous pyelitis, a considerable quantity of albumen is observed in the urine, while the proportion of globules of pus is very small; while on the other hand urine containing much pus affords but little coagulum, only a light milky tint, after filtering, and applying heat and nitric acid.

When the passage from the pelvis, distended with pus and urine, is entirely closed, the urine passed by the patient may for some days be entirely natural or mixed with pus; while the tumour will continue to enlarge. The renal pain then increases; fever is excited; retching, and even vomiting may occur. Should the urine find a passage through the ureter, the patient will in a short time evacuate a large quantity of urine, which will be accompanied by a sensible diminution of the renal tumour.

If, however, the retention continues, the kidney will be perforated on its posterior surface, either into the peritoneum or intestines. (*See Fistulæ Renales.*)

In other cases still more serious, the emission of urine may be suspended during several days. When complete retention of urine is prolonged, the patient will die, either from a double pyelo-nephritis, from perforations of the kidney, or from cerebral derangement. This retention has been observed in cases of double calculous pyelitis, and in cases where both ureters were obstructed by one or more calculi.

Fifth Stage.—(Atrophy of the kidney without purulent secretion.)

Finally, in calculous pyelitis, it may happen that the mucous membrane of the pelvis and calices in contact with a large calculus, becomes so much thickened and indurated, that it will secrete no more or very little pus. In this case the dilated pelvis and calices form with the substance of the atrophied kidney a species of shell, which fits more or less exactly over the calculus. If the opposite kidney is in a good state, this condition, however well marked, may not be suspected during life. Patients will suffer little or no pain, and no pus will be found in the urine. But these patients will die in a few days should calculus obstruct the other ureter, and cause a complete retention of urine.

I may add, that in other cases death will occur without any real retention of urine, probably in consequence of serious derangement of the urinary secretion, or of the suspension of this function. (*Ischuria renales.*) It appears, also, that complete suppression of the urinary secretion may take place when only one of the ureters is obstructed by the calculus.

In several cases, indeed, where the cortical and tubular substances of one kidney were almost destroyed, the urinary secretion has been observed, nearly as abundant as usual, on account of the increased activity or increased size of the other! I will only add one word on certain rare varieties of calculous pyelitis. It is well also to be aware that in consequence of displacement of the kidneys, the seat of pain in calculous pyelitis may be in the umbilical region, or in the hollow of the bony pelvis.

Some authors speak of the symptoms of pyelitis calculosa occurring periodically. Pyelitis calculosa seldom exists alone; it is nearly always associated either with other lesions of the urinary organs, or with lesions of some other apparatus. I will point out shortly the most common and the most important of these complications.

Diagnosis.—Calculous pyelitis in its various forms may be confounded with a great number of other diseases. Many symptoms of inflammation of the pelvis are, indeed, observed in other affections: thus a mucous or purulent secretion takes place in inflammation of the ureter, bladder and urethra; the pain in the loins exists in lumbago, in nephralgia, &c.: finally, if a pain in the lumbar region be one of the signs of a collection of pus in the

dilated pelvis and calices, other lumbar tumours have neither the same origin or the same seat.

1st.—*Lumbar pain* is experienced in different species of acute nephritis, in hydatids of the kidney and of the ureter, in nephritic colic, in retention of urine without inflammation, in lumbago, in certain diseases of the spine, in psoitis, in aneurisms of the descending aorta, in gestation, in certain diseases of the uterus and its appendages, in some cases of partial peritonitis, and in inflammation of the cellular tissue outside of the peritoneum.

2d.—*In nephritis* the pain is often so much like that in calculous nephritis, that we must resort to other characters to distinguish the affections: in pyelitis calculosa the pain is generally more acute. In doubtful cases we must have reference to the presence or absence of mucous or purulent matters in the urine, and to the existence of a tumour in the lumbar region. If these two symptoms are wanting, we may suspect the existence of pyelitis calculosa, when there is a pain in the lumbar region, with fever, exhibiting exacerbations, with an accession of symptoms similar to those commonly observed in nephritic colic.

3d.—Hydatids of the kidneys, when their cysts communicate with the pelvis, are often accompanied with renal pains, which, as in calculous colics, extend down the ureter to the bladder. There is often a passing retention of urine, with violent expulsive efforts, which are sometimes followed by the voiding of pellicles of hydatids, through the urethra. If there exist at the same time, hydatids in the interior of the pelvis and inflammation of the same, there are occasionally discharges of hydatids, renal pains and purulent urine. The excretion of hydatids and purulent urine, takes place where the hydatids proceed from cysts collected in an inflamed bladder. I have seen acephalocystic cysts, independent of the kidney, present themselves simultaneously from the urinary passages and from the intestinal canal, the hydatids being excreted at once per anum and per urethram.

4th.—Pyelitis calculosa with nephritic colic are distinguished from nephralgia by the fact, that in the first the pain is often much more acute and more intolerable, and that it ceases instantly after the emission of a gravel, or on its passage into the bladder from the ureter.

5th.—In the case of retention of urine, complete or incomplete,

it is not uncommon to hear patients complain of a pain in one or both lumbar regions : pains so severe as to induce the belief in the existence of nephritis or of pyelitis calculosa, and yet after death no appearance of inflammation will be seen ; the kidneys, more generally pale than red, appear healthy, with the exception of a slight atrophy of the cones. In this case death occurs suddenly from cerebral derangement.

6th.—In lumbago the pain commonly affects both sides at once, and generally with the same degree of severity ; it is always exasperated by the movements of the body ; it is generally without fever, and sometimes preceded by other muscular or arthritic pains ; in pyelitis the pain is experienced nearly always on one side alone, (cases of double pyelitis calculosa are rare,) or at least with unequal intensity in the right and left sides ; it is augmented by contraction of the lumbar muscles, but this augmentation is not to be compared to the pain occasioned by contractions of the muscles in lumbago. Nevertheless it is always easy to distinguish between the pain of lumbar rheumatism and a renal pain. The opinion expressed by Boerhave on the nature of a pain experienced by him in the region of the kidneys, appears to me to be correct.

7th.—We can scarcely confound pyelitis with *neuralgia of the loins*, in which the pain follows the course of the nerves of the abdominal parietes, or along the last ribs. We must also distinguish the renal pains observed in calculous pyelitis, from dorsal or lumbar pains which pass around the trunk, through the base of the chest or of the abdomen, and which are sometimes accompanied with paralysis of the sphincter ani, of the bladder, or of the inferior extremities.

8th.—In caries of the lumbar vertebra the pain is dull, and generally much less intense than in pyelitis calculosa. This caries is distinguished also by the deformity of the lumbar vertebræ, and often by abscess from congestion, either towards the fold of the groin or towards the buttocks ; finally, by a paraplegia, complete or incomplete ; sometimes without mucus or purulent mucous in the urine. At the same time paraplegia often induces retention of urine, which produces chronic inflammation of the bladder, and sometimes of the ureters and of the pelvis : complications in which we find the characters of caries of the vertebræ and of pyelitis.

9th.—In psoitis, the patient feels a dull pain in the side affected; this pain becomes afterwards more acute, extending from the lumbar vertebræ to the pubis, and the body is bent forwards and towards the diseased side; the movements of the thigh are very painful; and it is very difficult, not to say impossible, to straighten the back when the body is once bent. After this the glands of the groin become enlarged; then a collection of pus is formed under the peritoneum and substance of the muscle, often with swelling of the limb. When this collection of pus is considerable, it forms sometimes a tumour on one side of the bony pelvis, easily detected by the touch and by percussion. We may confound these purulent deposits with inflamed psoas muscle, with calculous pyelitis, and they may open into the bladder.

10th.—Aneurisms of the aorta have been seen to produce lumbar pains similar to those in the kidneys. Occasionally, the aneurismal tumour has been developed on the side of the abdominal cavity without altering the vertebral column (a case in which it is extremely difficult to detect it): and again it has been found on the lumbar vertebræ, and forming a pulsating tumour in this region.

11th.—Nothing is more common, than to hear, *towards the end of gestation*, females complain of pain *in the kidneys*. But these pains, which are situated much lower than the lumbar region, cannot be confounded with those of pyelitis calculosa. I have already observed that pyelitis calculosa and nephritis occasionally coexist with gestation, and that they are a cause of abortion: the examination of the urine will place us right in this matter.

12th.—Certain diseases of the *ovaries*, *partial peritonitis* in the lumbar region, may simulate disease of the kidney, and especially calculous pyelitis, particularly if they coexist with an acute or chronic cystitis; it is very easy to be deceived under these circumstances.

13th.—The same remark may with greater reason be made in reference to inflammation of the extra-peritoneal cellular tissue, in the vicinity of the kidney. This affection may be confounded with pyelitis, when the urine contains no pus or when there is retention of the matter secreted. On the other hand, when the lining membrane of the bladder is more or less inflamed, the presence of globules of pus in the urine may induce a belief in the

existence of inflammation of the pelvis, in the case of peri-nephritis complicated with cystitis. In this last case the diagnosis is never clear.

14th.—Inflammation in a circumscribed point of the ascending or descending colon, may in certain cases simulate calculous pyelitis; but there is nearly always functional derangement of the intestines, especially alternate diarrhoea and constipation, accompanied with the discharge of gas. Otherwise, in calculous pyelitis, the urine is always mixed with a quantity of pus, when the connection between the pelvis and the bladder is not entirely obstructed; in colitis, the faecal matters are often mixed with blood or mucus. Though we sometimes see these two affections exist at the same time.

15th.—I have occasionally seen hysterical females suffer in the region of the kidney, on one side, pain like that of nephritic colic; but in this case, the urine was pale, very watery, and perfectly transparent.

16th.—Finally, the source of pain may be felt in the wrong kidney. I have seen a patient with calculi in the right kidney suffer the pain in the left.

Cases are cited also where patients have not complained of pain in the kidneys, (*pyelitis calculosa latens*).

The *secretion* and *excretion* of pus or of purulent mucus in the urinary passages, may exist not only in pyelitis but also in other diseases, either of the urinary apparatus or of other organs. Pus from the extra-peritoneal cellular tissue, the psoas muscle, the ovary, &c., either in the pelvis, in the ureter, or in the bladder; the urine becomes charged with pus from acute or chronic cystitis and simulates disease of the kidney, as also disease of the kidney may simulate one of the bladder.

We have said that when there is neither pain nor swelling in the region of the kidney, the examination of the urine will enable us to distinguish between pyelitis and cystitis; that in inflammation of the pelvis and calices, there is dysuria with a deposit of true pus; that in catarrh of the bladder the urine is glairy and viscous. This remark is true in a certain number of cases; but I have already observed that the glairy appearance may be caused in renal pus by the presence of a certain amount of alkali in the urine, and that the pus of cystitis is not always glairy.

The presence of mucus or pus in the urine, unaccompanied with pain in the bladder, is not characteristic of pyelitis calculosa. To suppose that pus comes from the pelvis or calices, occupied by one or more calculi, there must have existed more or less pain in the upper region of the kidneys.

It is pretended that pus from the kidney is evacuated after the urine; it is certain that it is evacuated, mixed with the urine, but in greater quantities at the end of the emission, whether it come from the bladder, ureters, or kidney.

I will not now speak of the diagnosis of pyelitis calculosa from critical and metastatic excretions of pus with the urine; I will speak of this in another place.

It is more difficult (on account of the rarity of the case) to demonstrate the true seat of suppuration, when the pus, produced by pyelitis or an extra-renal abscess, passes under Poupart's ligament on the buttock or from the vicinity of the anus. Sometimes the discharges, gravel, generally urates, mixed with the purulent matters which are discharged by the fistula, decide the character of the lesion.

The discharge of purulent fluids, with the odour of urine, or containing urea or uric acid, is pathognomic of renal abscess in the loins.

We have seen pus from an inflamed pelvis discharged with the stools, in consequence of fistulous communication between the dilated pelvis and the duodenum or the ascending colon, or even with the rectum, when the kidney is misplaced.

(To be continued.)

BIBLIOGRAPHICAL NOTICES.

Minutes of the Proceedings of the Committee, appointed on the 14th of September, 1793, by the Citizens of Philadelphia, the Northern Liberties, and the District of Southwark, to attend to and alleviate the Sufferings of the Afflicted with the Malignant Fever, prevalent in the City and its vicinity. With an Appendix. Printed by order of the Select and Common Councils of the City of Philadelphia. 8vo. pp. 243. Philadelphia, 1848.

For this volume, of which a limited number only has been printed, we are indebted to a Committee of the Select and Common Councils of the City of Philadelphia, of which Charles A. Poulson, Esq.—himself a man of science—was the able and energetic chairman. The Committee were “appointed to inquire if there be any manuscripts relating to the city worthy of being printed, and report the same with the probable expense,” and the result of their investigations was to select the “Minutes” before us, as having, in their opinion, “peculiar and paramount claims at this time to the attention of Councils.” They, therefore, recommended, “that they be authorized to cause the said “Minutes” to be printed; and added—

“In relation to these ‘Minutes,’ your Committee deem it proper to state—that in addition to their intrinsic value as illustrations of the history of our city during a season of frightful calamity, and the almost total prostration of its government and industry—they furnish also appropriate means of gratitude—by perpetuating in a permanent form the records of the heroic self-devotion and chivalric deeds of those noble men who so fearlessly exposed themselves, amid disease and death, to rescue the lives and property of their fellow citizens from destruction, and for the care and protection of the helpless and pestilence-made orphans. Such testimony of gratitude is due, and especially to the memory of the venerated Stephen Girard; whose subsequent munificent benefactions, great as they are, have afforded no higher evidence of his benevolence, generosity and usefulness.” p. 4.

Together with the daily records of the Committee of Citizens, the “Minutes” contain Reports by Doctors Physick, Leib, Cath-

rall, Annan, Duffield, Deveze, and others; a list of the names of the sick who were admitted, died, or were discharged at the hospital, Bush Hill; an account of the contributions in money, food, clothing and medicines for the use of the poor and sick received by the Committee from citizens of Philadelphia residing in the neighbourhood, and from the States of Pennsylvania, New Jersey, New York, Massachusetts, Delaware, Maryland, and Virginia; a list of the orphans, &c. &c.

We have looked over the "Minutes" with unmixed satisfaction, and are sure that the excellent Chairman of the Committee will pardon us when we say, that we should attempt in vain to depict the feelings, which the perusal has given rise to, in more just and eloquent language than in the following extract from the letter to the writer of this notice accompanying a presentation copy of the "Minutes:"

"The contents of the volume supply evidences, rarely found so eminently striking, of disinterested philanthropy striving against fearful and overwhelming obstacles, during the pestilence of 1793; unprecedented at least in the annals of our city.

"The beautiful examples exhibited in the conduct of the members of the 'Committee of Citizens,' should, I think, induce the most sceptical to correct an opinion, that the efforts of philanthropy are to be traced to no other motives than those ascribed to the hope of reward, or the fear of punishment, *two* incentives to virtuous deeds, it is true, too much relied on, perhaps because they are inculcated with our earliest perceptions in the nursery, and cease not to sound in our ears even from 'high places' to the close of our probation.

"The conduct of the noble men, the 'Minutes' of whose proceedings you have in this volume, presents to my mind a moral grandeur vainly sought for in the battle field, or elsewhere, where glory is said to be found; indeed, nowhere so pure, as where 'Stephen Girard, and Peter Helm at the hospital,' and their colleagues were found, for successive weeks, like 'ministering angels' doing good to the destitute and sick! The first and greatest of all admonitions could alone have impelled and sustained them, under such discouraging and terrific circumstances."

Report of the Water Commissioners on the Material best adapted for Distribution Water Pipes; and on the most Economical Mode of Introducing Water into Private Houses. 8vo. pp. 67. Boston, 1848.

This—like the last work noticed—is a municipal production. It is a well executed Report, mainly as to the propriety of employing leaden service pipes in the introduction of the water of the Cochituate Lake into Boston; and its conclusions appear to us as unanswerable as the positions and arguments are soundly logical. “Upon a careful examination of this mass of testimony,” say the Water Commissioners—Messrs. Nathan Hale and Thomas B. Curtis—“we regard it as satisfactorily proved, that the water of Cochituate Lake, which is about to be introduced into the city [Boston], may be safely distributed to private dwellings, by means of leaden pipes, without danger to the health of those who may freely use it with their food.” p. 19.

Much excitement, it appears, has prevailed in Boston on this question, arising from the fact, that the water of certain wells does act rapidly on lead exposed to it; and hence it became important to see what would be the effect of the water of the lake on that metal. This was shown to be analogous to that observed in the case of the waters of the Thames, Schuylkill, Croton, &c., being in no case to such a degree as to act injuriously on the system. The Board of Consulting Physicians of the City not having, in their Report to the City Council specified or expressed an opinion as to the material most entitled to preference for water pipes, the Water Commissioners, in coming to a decision, paid “careful attention to the information and opinions of the scientific gentlemen who have given replies to the inquiries addressed to them by the Board of Consulting Physicians, and particularly the results of the very thorough investigation and experiments of Professor Horsford, of Harvard University.” “These results”—they properly remark—“appear to us to be of great value, and in corroboration of the great mass of evidence derived from a very extensive observation of the use of leaden pipes for the supply of cities and towns, for a long series of years, entirely satisfactory and conclusive.”

We extract—although at considerable length—the opinion of the Commissioners on the subject of the best material for water pipes, and on the interesting results arrived at by Professor Horsford.

“While this subject was undergoing the investigation of the consulting physicians, and of the eminent chemists who had been invited to aid them in the inquiry, the Water Commissioners were under the necessity of beginning the work of laying down the distribution pipes. They deemed it improper to make use of a material which might in the result be proscribed, as dangerous to the health of the citizens. They accordingly procured iron pipes of one and a half and two inches in diameter, to be cast, which have been laid down for carrying the water from the street mains to the sidewalks, and in part to the dwelling houses, so far as this branch of the work has been yet accomplished.

“The cost of pipes of this description, including the laying down, is considerably higher than that of pipes of lead, independently of the cost of making additional joints, where they are required. There is also a further objection to the use of these pipes, that with the greatest caution which can be used in laying them, they are more liable to be broken than pipes of lead, or other flexible metal.

“In the mean time, we have given attention to experiments which have been made of pipes constructed of various other materials. Tin has been used for coating the internal surface of pipes of iron, lead and copper, for the purpose of preserving them against the action of the water upon those metals. Pipes of each of these descriptions have been strongly recommended, on some limited experience, but we are of opinion that there is not sufficient evidence of the durability of the coating, in either form, to justify its adoption for general use. Pipes of block tin appear to be in some respects preferable to either description of those formed of other metals, and merely coated with tin. The cost of tin per pound is about four times that of lead, but as it is of greater tenacity than lead, a smaller quantity of metal serves to give the pipes a sufficient degree of strength, so that pipes composed of block tin, of a suitable thickness, can be procured at about double the cost of pipes of equal strength composed of lead. But the experiments detailed in the reports of Professor Horsford, as well as information derived from other sources, show that tin is gradually dissolved by the Cochituate and other similar waters; and that the decomposition does not in a short time cease, like the lead in the same water, but continues, as far as any experiment has been made, indefinitely. It is also liable to rapid decomposition, by being brought in contact externally with certain acids and gases, to which in various positions it will be exposed. Whether any sensible deleterious effect upon the water is produced

by the gradual decomposition of the tin pipe, is a question which has not been satisfactorily determined. But for the reasons briefly stated, we are of opinion that, independently of the question of comparative cost, tin is no better adapted for the distribution of the water of Cochituate Lake than lead, and that probably it would prove less durable.

“Pipes manufactured of malleable iron are used to some extent in various places, for the distribution of water for domestic uses. They are in every respect well adapted to the purpose, with the exception of their liability to corrode, by the action of the water within, as well as the effects of moisture on the external surface. They are stronger than lead, and not more expensive. They can be made of any desirable dimensions, and are not liable like cast iron to be broken, by an unequal pressure on the different parts. The experience of their use, however, so far as it has come to our knowledge, is too limited to enable us to form a positive judgment of the force of the objection above mentioned. It has been apprehended, that the effect of rust would be such as to render the water unfit for use in the washing of clothes and linen, and in process of time, to close the aperture of the pipe.

“Pipes formed of sheet iron, coated internally with hydraulic cement, have been recently introduced, and they promise to be highly useful under certain circumstances. When laid in the earth, and in situations exposing them externally to moisture, they are protected by a covering of hydraulic cement, which, besides preserving the iron against rust, gives an additional strength to the pipe. Whether they can be economically used for the distribution of water from the mains, has not been fully determined by any experiment within our knowledge.

“The consulting Physicians, in their report above referred to, although they did not recommend the use of distribution pipes composed of lead, strongly intimated the expectation that the doubts which they entertained might be removed by further experiments. It was important to reconcile the fact, that on immersing lead in water taken from the Fairmount, Croton and Jamaica Pond Water Works, it undergoes a perceptible partial dissolution, with the well attested evidence, that a large portion of the population of the cities of Philadelphia, New York and Boston, are in the constant use of water from those works, drawn through leaden pipes, without experiencing from it any injurious effects. The experiments which had been at that date begun by Professor Horsford, and have been since more thoroughly prosecuted by him, afford in our opinion a satisfactory solution of this apparent contradiction. These experiments demonstrate that the action of the comparatively pure water of lakes and rivers, upon bright bars of lead, which on their immersion in it, is distinctly perceptible, ceases after a period of a few days; and

that this immediate action of the water, upon the surface of lead, forms a coating, which, for all practical purposes, is impervious to water, and entirely insoluble in it. This coating remains unchanged during any period in which it has thus far been immersed; its appearance after some months or years of immersion, in the case of the Croton, is quite the same, as within three or four days from the first immersion. The water on the first and second days in which the lead is so immersed, and during the continuance of any perceptible action on the surface of the leaden bars, shows traces of a mixture of lead, on trial by the ordinary tests; but on the repeated removal of this water, and substitution of other water from the same source, after the coating is formed, no trace of lead is discoverable by the most effective tests, after any length of exposure of the water in contact with the lead, which will ordinarily occur.

"It has, however, never been doubted by those who have investigated this subject, that the water of wells and springs of certain descriptions, and in certain situations, exerts a much more powerful and a continued effect upon lead with which it comes in contact; and that cases of paralysis, colic, and even death, have been traced to the drinking of water contaminated by this poisonous mixture. The negative evidence that no well authenticated cases of these diseases have occurred, in consequence of drinking the waters furnished by the public water works of the cities of London, Philadelphia, New York, and many other places, when distributed through leaden pipes, authorizes the belief, that the scattered cases of disease of these descriptions, which have been usually traced to the use of water from wells and springs, have arisen from some property peculiar to the water from those sources, and not common to water derived from lakes and rivers. Attempts have accordingly been made, to discover the nature and sources of the mixtures, which impart to water the power of acting more energetically upon lead. It is observed that nitrates possess this power, and that they are frequently found in well water. The observations of Professor Horsford have led him to the conclusion, that the unequal proportion of these salts constitutes the chief distinction between different waters, in their relation to lead. These salts are often, if not uniformly found, in the water of wells and springs, so situated as to be replenished by the filtration of water through a soil enriched from the stable, or by the wash from collections of animal substances of any description. A small solution of saltpetre, or of a nitrate of any description, in water, is found to impart to it the property of dissolving lead, and thereby forming the nitrate of lead. This substance renders the water undoubtedly deleterious, and dangerous to the health of those who drink it, or use it in the preparation of their food. This explanation, which seems to be fully confirmed by ample experiments, accounts sufficiently for the fact, that the water of wells situated, as are a large portion of those

in town and cities, and of springs situated in the midst of richly cultivated fields, or in the vicinity of animal deposits of any description, may produce the chemical effect here described, upon the leaden pipes used to conduct it, while the waters of rivers and lakes, not particularly exposed to contact with substances of that nature will be destitute of any such power.

“ So long as it remained unknown what ingredients imparted to water the property of acting upon the surface of a leaden pipe, in such manner as to convert it into an active poison, the fact that the water flowing from a particular source was harmless at one time, did not afford a satisfactory assurance against its becoming dangerous at another; especially when it was fully ascertained, that it possessed the property of dissolving lead in a sensible degree, on its first immersion in it. But since it has been discovered as the result of repeated trials, that the effect of the waters of the Schuylkill and Croton rivers, and of Cochituate and Jamaica lakes, upon lead, is limited to a short period from its first immersion, and that by this temporary effect, there is invariably produced an indissoluble coating on the surface of the lead, which permanently protects it against any further action of the water upon it, and consequently preserves the water against imbibing any poisonous property; and since it is further ascertained that the more efficient power of dissolving lead, which is found to reside in certain waters apparently pure, is imparted by a substance rarely if ever found, except in a very minute degree, in the water of lakes and rivers, but which is often found in the water of wells and springs, there appears to be no longer any good ground to apprehend injurious effects upon water, of the former description, from its being transmitted through leaden pipes. A perceptible line of distinction is thus drawn, between a class of waters which are liable to acquire the property of imbibing a poisonous substance, by contact with lead, and another class, which, in a very wide experience of their use for domestic purposes, have been found not to possess that property.

“ For the evidence of these facts, we refer to the several reports of Professor Horsford, appended to the report of the Board of Consulting Physicians, and (until the publication of a more detailed report of his further experiments) to his letters subjoined to this report, and to the corroborative documents annexed.

“ Professor Horsford, in the letter dated July 25th, expresses the following opinion: ‘ Without an attempt at further enumeration of the conclusions at which I have arrived, I may state, with whatever of emphasis uninterrupted investigation from the first of last February until now, may justly give to the opinion, that *Cochituate water may be served from leaden pipes, connected with iron mains, without detriment to health.*’ The opinion here expressed would command a high degree of confidence if it stood alone. Confirmed as it is

by an evidence of collateral testimony, derived from long continued experience, we consider it entitled to entire confidence. The experiments detailed in Professor Horsford's first report, exhibiting the chemical action of the water of the Fairmount, Croton, and Jamaica Pond Water Works, and of the Cochituate lake, prove that there is a strong similarity in the effects of the waters from those several sources, upon lead.

"The ample testimony, founded on the continued use of the waters from the three first named sources, for a series of years, by thousands of families, without a single distinctly proved case of lead poisoning, although the water is served from the mains to the dwelling houses almost universally through leaden pipes, affords as satisfactory demonstration as the nature of the case admits of, that the Cochituate water may be safely distributed in the same way." p. 12.

Evidence, in regard to the absence of noxious lead impregnation from the New York, Philadelphia and other waters in which leaden service pipes have been and are employed, is given by numerous chemists and physicians; and the Report concludes as follows:—

"The grounds on which lead is preferred for the composition of small distribution pipes are, that the metal is cheap; it is easily formed into pipes, of any convenient size or length; it is flexible and easily adapted to all situations, in which it is desirable to place it; it is of sufficient strength to bear the pressure of any ordinary head of water, and if made of a suitable thickness, and provided with proper guards against the effects of a sudden check of the current, it is capable of resisting the extraordinary shock thus produced. It moreover preserves the water in a state of purity, and is itself durable, unless dissolved by the action of substances foreign to the source from which the city is to be supplied. Pipes of this material may be laid in a much shorter space of time, and at less cost, than those of cast iron.

"We have, therefore, on these considerations, resolved to use leaden pipes, for conducting the water to houses, except in cases in which the owners or occupants shall make known their preference of iron pipes, and announce their determination to make use of pipes of iron, or of some other material than lead, for the conveyance of the water through their respective houses, to the place of delivery, for use, for culinary purposes. Persons making such requests will be furnished with the water by means of pipes of cast iron.

"Having thus expressed our views in regard to the material of which the pipes should be composed, we proceed to comply with the order of the City Council, requesting our opinion 'as to the best and most economical mode of introducing water into private houses.'

“We recommend, that when leaden pipe is used, it should be five-eighths of an inch in diameter, weighing about three pounds to a foot in length, and that it be conducted through such part of the cellar, as will afford the best protection against frost, to the kitchen or sink-room, where the most constant supply will be required. As the water will rise, in most parts of the city, to any part of the house, in which it may be desired, and will be ready to flow from the pipe at all times with a rapid current, no tank or pump will be necessary. From any part of this pipe, a perpendicular branch may be carried to any other part of the house where the water may be desired, for the supply of baths, or any other purpose, care being taken to place it near the chimney, or in such position that it will be best protected against freezing. All pipes not so protected, should be laid with such an inclination, as will admit of their being emptied, when there is danger of freezing, by opening a discharge cock, to be placed at the lowest point. Pipes in being carried through coal cellars, and other exposed places, should be carefully protected against frost. It is desirable that the pipes shall be so placed as to be accessible for observation or repair.

“With these precautions, and by the employment of a skilful plumber to adjust the fixtures, the water may be conveyed to any part of the house at the pleasure of the occupant. Those who may choose to avoid the expense of such fixtures, may receive the water from a single stop-cock, at the place at which the pipe is introduced into the premises, or, which will be preferable, at the sink-room or kitchen. At all places of discharge there should be a sink, with a pipe to carry off the waste water. To every stop-cock also should be attached a piece of vacant pipe, or other air chamber above it which, by the compression of the air on the sudden shutting off of the water, may serve to relieve the pipe from the shock of what is called the *water hammer*. Otherwise, on account of the rapidity of the current, from the pressure of so high a head of water, as will rest on the pipes throughout the greater part of the city, they will be liable to be burst, or gradually expanded by repeated shocks.” p. 22.

The Report is well worthy of being filed away by professional and municipal authorities; for the same question will doubtless recur when some other town is to be supplied with water. It is, as before said, ably drawn up; and the Appendix contains five excellent Reports of Professor Horsford; with Letters from John B. Jervis, Esq., Consulting Engineer of the Boston Water Works; from F. Boott, M. D., of London; from Professor Duglison, not “of the University of Pennsylvania,” as the Report inadvertently states; from Dr. Benjamin H. Coates, and from Dr. Hare, of Philadelphia; from Dr. Lincoln, of Lancaster (Mass.); from Pro-

fessor Hubbard, of Hanover, New Hampshire; from Dr. Thomas C. Brinsmade, of Troy; from Professor James McNaughton, of Albany; and from Professor Aikin, of Baltimore. From the letter of Mr. Jervis we make the following pregnant extract:—

“A trial in the U. S. Courts, as to patent of tinning lead pipe, in this city was had. On this trial, Prof. Rénwick was called as a witness, and testified decidedly as to the injury of unprotected lead on water, and the necessity of protecting by tinning the lead;—that he would not, on any account, use lead pipe without tinning. On cross-examination—Do you use Croton water? Yes. Ever experience any injury? None whatever. What pipe is used? I presume tinned lead. The plumber who put in the pipe was then called, and testified that the pipe laid was all common lead pipe.

On the same trial Doct. Lee was called, who testified strongly as to the deleterious effect of lead pipe—that he would not have the water brought into his house, because his landlord refused to put in tinned pipe, and he therefore got his water in the street, from a free hydrant, where he said no lead was used. On cross-examination—Have you experienced any ill effects from using the Croton water from the street hydrant? No. The plumber who put in this hydrant was called, and testified that the pipe used for the hydrant was *pure lead*.” p. 35.

An Account of some of the most important Diseases peculiar to Women. By ROBERT GOOCH, M. D. *With Illustrations.* Second (American) Edition. 8vo. pp. 322. Edw. Barrington & George D. Haswell. Philadelphia: 1848.

This work may rightly be called one of our medical classics, both from the excellence of the matter and beauty of its style; and yet, as it embraces only a limited range of subjects, it has probably never been read by one-twentieth of the physicians of the United States! “*Multum in parvo*,” is the motto of nearly all. One book, or at most a few volumes, must contain the whole range of medicine, if not of human knowledge. Lately, Dictionaries and Cyclopædias, and now manuals, are all the rage. Even *systems* are hardly tolerated; and as for monographs, few publishers have the temerity to attempt their publication, and, far less, their republication. In the present anxiety for improvement and reform in our profession, we should be very glad to chronicle a reform in

this respect. Let physicians be less parsimonious in their purchase of books, and more industrious in reading and studying them, and they will soon lose their passion for digests and manuals, and even systematic treatises, and learn to appreciate good monographs. While the former are too frequently the offspring of a bookseller's spirit for speculation, the latter are almost always the productions of actual observers, describing what they have seen, and announcing the suggestions of their own minds, arising from the objects presented to their immediate observation. The volume before us is of this character. It may be regarded as a collection or series of monographs, on some of the severest, and therefore most interesting, of the diseases to which the human female is liable, from one of the most accomplished medical writers in the English language, whether we regard his natural endowments, his educational advantages, or the extraordinary opportunities he possessed for acquiring information on the subjects upon which he has written. Although we have been familiar with the work for a great portion of our professional life, we can still read it with undiminished interest. The narrations are so clear, the reasoning so lucid, the conclusions so just, and the style altogether is so faultless, that it seems always new to us, and we cannot help thanking the publishers for the real service they have rendered to the profession by the republication of this charming volume. We strongly recommend to every *young* physician, at least, to possess himself of this book of Dr. Gooch, if it be only to learn how to observe—how to think—and how to write what he has seen and thought.

The Principles and Practice of Medicine, in a series of Essays.

By JOHN W. HOOD, M. D. 8vo. pp. 263. Thomas, Cowperthwaite & Co. Philadelphia: 1848.

To those who think a great book is a great evil, it will be good news to hear of the *Principles and Practice of Medicine* being reduced within the compass of 263 octavo pages, well leaded, and with good wide margins, which render a book so agreeable to old eyes, as well as satisfactory to the furtive glances of the young.

The book is a new one, too. The author's opinions of pathology and therapeutics are really original, and we believe not to be

found in any preceding book, which must delight modern reviewers, who have been wont to prove that there is nothing new under the sun, unless it chance to be their own lucubrations, or the wise cogitations or discoveries of a particular friend, or unless it emanates from a particular district. Practical people, too, will be pleased; for it is the offspring of the author's own experience—albeit, a thread of theory runs through the whole, and binds together the several parts.

“Each author,” says Dr. Hood, “if possible, should at least endeavour to rank with those of the preceding age, and it would be better for the profession if each contributor would give only what he has, or believes he has discovered, without borrowing, curtailings, or extracting opinions already published.” It appears to us that Dr. H. has adhered to his own rule with much more fidelity than the generality of authors and legislators; for, except some of his own previously published opinions, the book certainly contains marvellously few of the discoveries and opinions to be found in books, ancient or modern.

The Essays which constitute this volume of “THE PRINCIPLES AND PRACTICE OF MEDICINE,” treat of the “*Anatomical arrangement and configuration of the Body; Chronic diseases of the Viscera of the Abdomen; Strumous Habit; Fever; Displacement of the Womb; Asiatic Cholera; Mechanical Agents; Reducible Hernia; Hemorrhoids, or Piles; Gout; the Tongue;*” and an “*Appendix*” of six pages.

If this enumeration of subjects falls short of what we are accustomed to meet with in works with so comprehensive a title, it at least includes a very good *variety*.

We have not had time to read this modern production through, and are therefore not qualified to give an impartial opinion upon its merits; but to afford the reader some opportunity of judging for himself of the author's *fundamental* doctrine, we quote the following from page 27, on the “*Anatomical arrangement and configuration of the Body.*” As far as we can judge, it embraces the *corner stone* of the grand superstructure.

“From a knowledge of the laws which govern the organs, and enable them to perform their specific functions, is it not strange that the various writers should have overlooked the cavity of the abdomen with its important assemblage of organs? all of which are de-

pendent upon the voluntary or involuntary movements of the nine muscles, and the connection with the serratus and latissimus dorsi. Sir Charles Bell, in his researches on the nervous system, which presides over the respiratory muscles, conclusively assigns the functions, and why is it that the physiologist has not been called to the mechanical functions of this part of myology? The failure of these muscles invariably leads to the destruction of health, and eventuates more frequently in death, than from all other causes—yet it is not to be understood that the failure is the remote cause in all, but it becomes an exciting one in some, and an irritating contributor to every functional or constitutional disease. In the debilitated or exhausted power of those muscles, it has been already shown, the viscera and fluids gravitate, and by the mechanical functions, with the assistance of the intercostal muscles, diaphragm and mobility of the ribs, inspiration and expiration are performed. Hence is it not evident and demonstrable that the lungs in their hinder and lower portions fail to dilate, and be traversed by the air? On such failures, which leave the blood in a pathological condition, is it not clear that the lower portion of the lungs becomes the seat of fatal congestions? Hence the importance of mechanical agents to assist the organs in this debilitated condition, until their lost energy is restored.”

As the reader may be curious to know something of the author's principles of diagnosis, we subjoin another extract:

“The failure of the organs of the abdomen is easily detected by a careful examination of the physiognomy of the patient. The strength of the body and the state of the mind, with the color and condition of the skin, are indexes of prevailing malady. But having thus ascertained the condition as far as sight enables us to determine it, we next make a careful exploration of the chest, by percussion and auscultation. After which sight and touch is combined, and having determined by the first the configuration, we trace by the second the organs that are liable to displacement, and ascertain, if possible, their size and position. Such examination is absolutely necessary in cases where the predisposing or exciting cause is suspected to have originated in the gravitation of the solids and fluids; without such examination our prognosis must more frequently destroy the confidence of the patient than otherwise. The importance of the organs of those two cavities, demands the closest investigation, and if we expect to sustain the dignity of our profession, we must do it by mitigating or curing the afflictions of the human family. The want of such attention is already manifest in the lost confidence of the public, and in the rapid growth of new systems which may be ascribed to the inattention of the faculty, and the credulity of the public. But if we discover that the difficulty

arises from hereditary taint, and the appearances are not of a character to define the cause, the habits of the patient, the age, sex, constitution, idiosyncrasy if any, and occupation, will enable us to judge correctly, and apply the agents adapted to the condition of the patient."

A System of Clinical Medicine. By ROBERT JAMES GRAVES, M. D., M. R. I. A., one of the Physicians of the Meath Hospital and County of Dublin Infirmary; formerly Professor of the Institutes of Medicine, etc., etc. *With Notes and a series of Lectures,* by W. W. GERHARD, M. D., Lecturer on Clinical Medicine to the University of Pennsylvania; one of the Physicians to the Pennsylvania Hospital, etc., etc. *Third American Edition.* 8vo. pp. 751. Edw. Barrington & Geo. D. Haswell. Philadelphia: 1848.

The Clinical Lectures of Dr. Graves have long had a deservedly high reputation. With a large share of enthusiasm, which gives warmth and interest to his descriptions of phenomena, we are continually struck with the boldness and originality of views presented by the author for our consideration, and one can hardly follow him without being strongly impressed with the conviction that the writer has examined his subject carefully and understandingly.

We have long been impressed with the similarity of views and modes of practice which obtain in the Irish metropolis and in Philadelphia. Indeed, we have repeatedly heard the observation made by gentlemen direct from the schools and hospitals in Dublin, while listening to the lectures and witnessing the treatment of patients in our own. Some differences, particularly in the phenomena which are presented during epidemics, proceeding from climatic or other local influences, may be observed in their descriptions of disease, and some slight differences of opinion as to the efficacy of particular remedies, owing, partly to the modifications mentioned, and partly, perhaps, to the force of habit, or other causes operating upon individual minds; but, as a general rule, the descriptions of individual diseases as observed in the one city, and the treatment recommended by eminent practitioners, will be found to be very nearly the same in the other. Hence it is, that

the writings of Colles, of Crampton, of Graves, and Stokes, and Churchill, are so well regarded among us.

"Since the last edition of Dr. Graves's Lectures was published in this city," says the Editor, "a new one, considerably enlarged, has been published by Dr. Graves, in Europe: from this edition the present one is printed. It contains the whole of the Lectures, which make a very large volume; but some detached papers, which were not printed in the former editions, and were first published in the present one, (English edition?) are not reprinted. These essays the publishers will probably issue in a separate form. The demand for a new edition is the best proof of the high character these Lectures have gained in the United States, and of the very extended reputation they have justly attained.

"The additional lectures, (by the editor,) which at the request of the publishers, were appended to the last edition of the work, have been revised, and some new matter on the subject of Typhus Fever has been added."

A Dictionary of Medical Science; containing a Concise Explanation of the various Subjects and Terms; with the French and other Synonymes; Notices of Climate, and of Celebrated Mineral Waters; Formulæ for various Officinal and Empirical Preparations, etc. By ROBLEY DUNGLISON, M. D., Professor of the Institutes of Medicine in Jefferson Medical College, Philadelphia. Seventh edition, carefully revised and greatly enlarged. Royal octavo. pp. 912.

The late hour at which this important work has been issued from the press, (Sept. 1848,) just enables us to announce its appearance, without criticism or extended notice. That a work of this description should have gone to the seventh edition, (and large editions too,) in the course of a very few years, is as remarkable as it is creditable to the liberality of the medical profession in the United States, and must be exceedingly gratifying to the gifted and laborious author.

Some idea of the extent and completeness of this Dictionary may be gained from the fact stated by the publishers, that it now contains "over forty-five thousand words;" and of the labour and pains bestowed by the author in the preparation of each succeeding edition, from the circumstance that the last or sixth edition, comprised two thousand five hundred subjects and terms not

contained in the preceding, and that there are in the present *over six thousand terms* not contained in the last edition! How different is the work from what it would have been, if the author, to save labour, and the publishers, to spare expense, had chosen to issue it from stereotype plates. By the course which is pursued the book keeps pace with science, and the reader, in looking into its pages for a new and obscure term, is almost certain to find it, which is the great charm of a good dictionary.

A System of Human Anatomy, General and Special. By ERASMUS WILSON, M. D. *Fourth American from the last London edition.* Edited by PAUL B. GODDARD, A. M., M. D., Professor of Anatomy and Histology in the Franklin Medical College of Philadelphia. 8vo. pp. 576. Lea & Blanchard. Philadelphia: 1848.

In this excellent work, all the improvements which have been made public since the appearance of the former edition, are carefully noted, and many additional wood-cuts added. The present edition contains 251 illustrations by Gilbert, and is every way deserving of approbation.

THE MEDICAL EXAMINER.

PHILADELPHIA, OCTOBER, 1848.

SECTIONAL MEDICINE.

The last number of the Southern Medical and Surgical Journal, (Sept., 1848,) under the head of "*Medical College Circulars*," contains some editorial remarks, which, after other articles that have appeared in recent numbers, pains, more than surprises, us. It would seem as if Jefferson Medical College had become an object of especial dislike to the learned editor, and, in the paragraph to which we have referred, he—by implication, at least—charges charlatanism upon the whole body of professors.

After some general observations relating to College Circulars, the

Medical Convention, extension of the lecture term, &c., the following remarks occur :

“As a Southerner, we cannot pass without comment the second paragraph in the Annual Announcement of the Jefferson Medical College, because it is evidently a renewal of the attempt made in the same and other quarters to undervalue local advantages which we feel that we, in common with our Southern and South-western brethren, undoubtedly possess in the study and treatment of Malarious diseases. The passage is as follows :

“‘The idea that a student of Medicine must be taught his profession in the very locality in which he is destined to practice it, is now generally, as it ought to be, universally, abandoned. It must be admitted that the great principles of the Science are the same every where, and that the student ought for his own sake, [for the sake of the Jefferson Medical College?—Ed.] to seek for information wherever it can be best and most readily obtained.’”

Did not the Editor's cheek burn when he penned the words in brackets, introduced by him in the above quotation? To recommend to students “to seek for information wherever it can be best and most readily obtained,” means to direct them to Jefferson Medical College! Well, if that be the true interpretation, who has a right to complain? But did it not occur to our Southern champion, that if by the inculcation of such sentiments the professors of Jefferson Medical College render themselves obnoxious to the charge of charlatanry, and a wish to attract students to their school, he, in advocating the contrary doctrine, might be suspected of a wish to detain them at the “Georgia Medical College,” in Augusta? We, however, make no such allegation. Much as we are inclined to follow his example on other occasions, we will not imitate it on this. It is charged that an attempt is made to undervalue the local advantages of the South in the study and treatment of malarious diseases! The obnoxious paragraph in the “Annual Announcement” is cited, and yet it contains not a word of the kind. What right has he to infer that the malarious diseases of the South are alluded to, any more than the milk-sickness of the West, or the pleurisies, pneumonias and adynamic fevers of the North? Could not the East and the West, and the North, make the same charge with equal propriety? Undoubtedly.

“Pulmonary affections,” says the Richmond College Circular, “are as prevalent at the North, as intermittent and remittent fevers in the Southern Atlantic States, and hepatic affections in warmer regions.” Therefore, they who are educated at Richmond and Augusta must be incompetent to treat a pneumonia or a hepatitis?

It might be thought from the remarks we have quoted that no one

can know any thing about malarious diseases but those who live in the South. And where are the South, and the South-west? What was the South when we were young, is a long way short of what is considered to be the South now-a-days, and the West has travelled some thousands of miles farther off.

Four or five years since, Southern and South-western diseases and their treatment were only known and to be learned in the schools of Kentucky; but now the mantle has fallen from the shoulders of the venerable father of "sectional medicine," and has gone to Memphis and Augusta! How long will it be until it reaches Vera Cruz or Yucatan?

But seriously—what is meant by malarious diseases? Is Yellow fever a malarious disease, and is that confined to the South? Why it exists on Staten Island, a hundred miles north of Philadelphia, while we are writing this paragraph! Are intermittent and remittent fevers malarious? Not a summer passes that we do not have them in the alluvial districts which surround Philadelphia, of every grade, from mild tertian ague up to the most alarming remittent, and occasionally so severe that the patient dies in the first or second paroxysm. And yet we possess no opportunities for the study and treatment of malarious diseases! But, say some of the professors of physic south of Mason and Dixon's line, your malarious diseases are not like ours! Why not, we ask! Have *you* studied and treated the malarious diseases of the Middle States? If not, how do you make the comparison? Is there anything about southern and southwestern diseases that the observers of them have not told us? If there be, why hide they their light under a bushel? But there is nothing that has not been said a hundred times over. Descriptions and dissertations on southern diseases fill the pages of their journals, and make up the greater part of the books with which "the south and south-west" have favoured us; and if the physicians of those regions have observed well, and describe well, we know all about their diseases. Many of us, too, have seen them for ourselves—have bearded the lion in his den—and are consequently not obnoxious to the charge of ignorance bestowed so freely upon us.

Except those who go to Kentucky, the far greater part of the students, who travel North for medical instruction, visit the colleges of New York and Philadelphia, and we should like to know from our southern polemic, which of the professors of the Theory and Practice of Medicine, in the four large schools of those cities, are incompetent to teach a student how to treat malarious diseases? Every one of them has had to deal with yellow fever time and again, to say nothing

of the milder forms of malarious fevers, which prevail more or less in the vicinity of those cities every year.

An esteemed correspondent, educated in the west, and familiar with the malarious diseases of the south-west previous to his entering the Navy, has given on another page *his experience* on this subject. He has not treated us with mere assertion, such as we have been combating; but has given facts, and substantial reasoning. Let us, instead of declamation, have facts. Where was the Southern editor himself educated, and where nearly all the able physicians of the South? In Northern Schools. Where were the major part of the physicians of the Army and Navy educated? In the same schools. Show us the instances in which the gentlemen in the public service who were educated in Northern schools proved incompetent to the discharge of their duties when stationed in the South, or those educated in the South or West were found wanting when performing duty in the North, and then we shall have something better to guide us than mere speculation; but until some such proof is afforded, we must be excused from subscribing to doctrines so repugnant to the dignity and usefulness of our science.

If the doctrine we are noticing be true, Congress ought to repeal the laws which authorize Surgeons to be appointed in the Army and Navy. The commanders of our ships should select their medical advisers from the native doctors of the climes wherever they may experience sickness; and our armies should be provided with physicians *pro re natâ* from among the Indians and Mexicans, and in every town or village through which they pass. Is the Editor of the Georgia Journal ready to head a petition to Congress for this reform?

The Southern Editor denies, that "the idea that a Student of Medicine must be taught his profession in the very locality in which he is destined to practise it, is now generally abandoned." "Such," he says, "may be the case at the North, but it is certainly not so at the South." We are sorry for it. Of all the wide world, the South—the southern portion of the United States—is the only place where such a disparaging doctrine is proclaimed. Why is it not as necessary to study medicine in New England for those who are destined to practise there, as it is for the Southern student to study in Augusta, New Orleans or Memphis? Does the Southern professor believe himself incapable of teaching his class the proper treatment of pneumonia, because it is less frequent and severe than in Boston or Portland? Are the physicians of London or Paris better able to treat convulsions than those of Geor-

gia? Must every specialty be learned where the objects of it most abound,—or where is to be the limit of the rule prescribed?

"The great principles of the science are the same every where," he admits; "but," he adds, "their applications are as various as the races of man and the differences of climate." Ay, say we, and the various other modifying causes, as age, sex, habit, season, and atmosphere. It constitutes the great utility of the principles of our science, that they are capable of being applied to the various conditions of the human system, induced by these modifying influences.

"Let Southern practitioners look into the numerous works upon the Practice of Medicine published in Europe or at the North, and he (they) will at once perceive," says the Editor, "that they contain but little of value in the management of our fevers." If not in these works, we should be glad to know where the desired information may be obtained? Dr. B. Rush Mitchell, however, has supplied the answer. The Navy Surgeons who were so eminently successful at Vera Cruz got their information from the very books which the Editor condemns, and were educated in Northern schools; and we hope it will not offend him to learn, that some of them were from Jefferson Medical College, and fresh from its halls.

In conclusion, we must say to our Southern friend, for so we still regard him, that we regret the tone of his remarks should have rendered it necessary for us to notice them. Nevertheless, if it is his purpose to maintain the position, that a student ought *not* "to seek for information wherever it can be best and most readily obtained;" and that a physician, however well instructed, is *unfit to practice except in the very locality where he has been taught*, we shall most cheerfully enter upon the discussion with him. But in doing so, let us not forget the proprieties of our profession, and impute wrong motives where arguments alone are the proper weapons.

PROFESSORS APPOINTED.

Mr. Arnott, one of the surgeons of the Middlesex Hospital, (London) has been appointed Professor of Surgery in University College, and one of the Surgeons to University College Hospital. This appointment is announced in the London medical journals without comment. From this we infer that we were right in our remark in reference to the objections made to Professor Syme; so that although the metropolitans have gained their point in having one of themselves selected,

it is doubtful whether the mass are any better pleased. One thing is certain, that they have benefited Edinburgh, and probably injured themselves, or at least their University.

In Edinburgh, Mr. Syme has been restored to his professorship in the University, and Dr. Hughes Bennett appointed to the chair of Institutes of Medicine, vacated by the election of Dr. Allen Thompson as Professor of Anatomy in the University of Glasgow.

In King's College, London, Dr. Bowman, the associate of Dr. Todd in many of his labours, has been appointed, conjointly with him, Professor of Physiology; so that hereafter the course will be divided between these eminent physiologists.

In this country, where the number of medical Colleges is nearly equal to that of all Europe, the appointments and removals are so frequent that we do not pretend to chronicle them all. Among others, however, we have heard of the following.

Franklin Medical College, Philadelphia, Dr. Joynes, Professor of Institutes, has resigned.

Philadelphia College of Medicine,—*resigned*, Professors T. D. Mitchell, D. R. Gardiner, L. H. Beatty and J. R. Burden; *appointed*, Drs. Savory, Kennedy, and Van Dyke.

Professor James Bryan, of Philadelphia, has been appointed Professor of Surgery in Geneva College, New York; and

William M. McPheeters, M. D., one of the editors of the St. Louis Medical and Surgical Journal, Professor of Physiology in the St. Louis University of Mo.

CHOLERA.

"In the whole of Russia," says the London Medical Times, "since the first appearance of the cholera, on the 28th of October, 1846, to the 5th of July, 1848, 290,318 persons were seized with the epidemic, and 116,658 died." According to late accounts, the disease was subsiding in Russia, but was spreading in Egypt, and some parts of Prussia. At Berlin it was quite rife. The Prussian government has established Cholera Hospitals in all the towns and large villages, and taken every care to lessen the horrors of the approaching pestilence.

"The French government has appointed a medical commission, composed of MM. Gueneau de Mussy, Chomel, Andral, Husson, Bouillaud, Bally, Gerardin, Cornac, and Gaultier de Claubry, to apply themselves to the discovery of means to prevent and to mitigate the effects of Asiatic Cholera."

THE OHIO MEDICAL AND SURGICAL JOURNAL.

This is the title of a new medical periodical, to be published every other month at Columbus, in Ohio. Each number is to contain ninety-six pages, octavo.

The first number, which is now before us, bears date, September, 1848. It is neatly printed, on good paper, and contains a large variety of useful matter, both original and selected. The work is to be under the editorial management of John Butterfield, M. D., Professor of the Practice of Medicine in the Starling Medical College, recently established at that place, aided by his colleagues.

The editor professes to have had no experience in his new employment, but the spirit of enterprise is in him; and, judging from the specimen before us, and the reputation he has already won in other professional undertakings, we entertain no doubt of the success of his efforts, and that our new contemporary will take good rank among the medical periodicals of the country. With this expression of our feelings, we add it with pleasure to our list of exchanges.

THE ANNALIST.

It is known to our readers that for some time past, a medical periodical with this title has been published, bi-weekly, in the city of New York. Our pages have borne witness of our appreciation of its character, by the numerous and valuable extracts from it which have from time to time appeared in the Examiner. In the last number, Sept. 15, we are sorry to find *The Farewell Address* of its learned and able editor, Dr. Roberts. After two years of labour and solicitude, he gives place to another, and the bantling, reared with so much midnight toil and at the sacrifice of so much social and domestic enjoyment, is henceforth to bear another's name. *Sic transit gloria mundi!* We have sometimes felt called upon to dissent from the views put forth in the Annalist, but much oftener have had occasion to commend, and often to admire, the high tone of the editor's remarks, when battling for the honour and welfare of our profession. To his successor, Dr. Davis, he leaves a bright example of editorial amenity.

MEDICAL COLLEGES.

In our last number, we gave a tabular statement of the number of Professors and length of the lecture term in many of the Medical Colleges in the United States. The list was necessarily incomplete, from

the imperfect data in our possession ; and later publications of several of them enable us now to correct some errors in our statement.

Thus, in the Winchester College it was said the term lasted *seven* months ; it should have been *eight* months.

The term in the College of Physicians and Surgeons of New York was put down as *five months and a half*, instead of *five months*.

We have in addition to those included in our former statement :

The Pennsylvania Medical College, six Professors—length of term, four and a half months.

Franklin Medical College of Philadelphia, six Professors—commences 16th of October ; duration of term not stated.

National Medical College, Washington, D. C., seven Professors, one Adjunct and one Associate—length of term, five months.

The Southern Medical and Surgical Journal says : “ No circular that we have seen has remained silent on the subject of reform, and although *all* the Institutions have not come up to the recommendations of the Convention, some have done so fully, and many others partially.” (Sept. 1848.) Will the editor have the goodness to mention the names of those Institutions which have come up to the recommendations of the Convention “ *fully* ” ? We have been somewhat attentive to this subject, and we do not know of *one* instance of the kind.

Laughable.—The editor of one of our most agreeable contemporaries, recently noticed our mistake, in stating that *five* instead of *six* months was recommended for the lecture term, in the *report* submitted at the last meeting of the American Association, and read us this lesson : “ Editors should be very careful how they make statements, which, when incorrect, can be so easily and completely refuted.” We shall say nothing of the moral tone of this remark, but merely for the amusement of our readers quote what the same editor said in his journal just one month before :

“ The last action of the American Medical Association was to reduce the lecture term from six to five months. To this change several colleges, we suspect a majority of the better organized ones, had already cheerfully acceded, throughout the country. The term is probably sufficient for the present ; it is as long as young gentlemen just now can be made to remain patient, and to receive any really useful information from the lips of their teachers.”

Truly, the editor is blessed with a short memory.

RECORD OF MEDICAL SCIENCE.

Report of a curious Surgical Case. By JOHN G. KYLE, M. D., Cedarville, Ohio.—In the spring of 1846, I was called to see ——— Moore, a boy aged two years—had been a very strong, healthy and fleshy child—now weak, much emaciated, and suffering great pain in the bowels—face pale, extremities cold, no appetite, secretions nearly natural, abdomen very tender on pressure, with a swelling or ridge semilunar in shape, commencing on the left and terminating on the right side of the abdomen, and running so nearly to divide the umbilical from the right and left iliac regions—about 14 lines in width, and one or two in height, skin slightly reddened, with the appearance of pointing at the extremity of the swelling on the right side, as if some foreign body was trying to make its way out, being, as yet, however, rather uncertain what direction it should take, in order to reach its intended destination.

The history of the case was, that, fourteen days previous to that time, the boy was badly choked by something, which, after some considerable difficulty he swallowed. After which his parents noticed nothing peculiar for two or three days, when he became fretful and peevish, lost his appetite, and had pain in his bowels. The parents thinking their child had colic, gave anodynes, cathartics and almost every thing else, but finding him growing worse and sinking rapidly, brought him to the village, where I then resided, Roundhead, O., for advice. Being called on, I found the boy in the condition already described. The history of the case with the then present symptoms, led me at once to conclude that the boy had swallowed some solid indigestible substance, and it having become entangled in some fold of intestine, had passed through its coats and was now pointing to the surface, and that an operation would be necessary to relieve the boy. The parents were, however, rather doubtful about the success of an operation, and asked until the next morning to deliberate on the matter, to which I readily assented.

When the morning came, Mr. Moore called and requested me to call and operate on his son, as he believed he would die soon, unless immediately relieved.

The symptoms more aggravated than yesterday—I, in the presence of Dr. A. De Long, L. M. White, Esq., and several other gentlemen, proceeded to operate in the following manner:—The boy being secured, I made an incision ten lines long about equidistant from the umbilicus and ant. sup. spinous process of the right ilium, cutting carefully through the integuments and abdominal muscles; a foreign body could now be felt under the peritoneum, which I punctured with a sharp pointed bistoury, and brought to view a brown corn straw, which I seized with a small pair of forceps, and drew out, applied simple dressings, the wound healed by the first intention, and the boy

regained his health in a short time. The corn straw was forked near the middle, measured 33 lines in length, one in diameter, and at the fork near 3 lines across. It had evidently been swallowed by the boy 15 days previous to the operation.

The novelty of the operation, the causes which led to it, and the happy result of the same, are the only apologies the writer has for thus making this case known to his professional brethren.—*Western Lancet*.

Citrate of Iron.—Our friend Edward Parish has shown us a *syrup of citrate of iron*, which appears to be a good preparation. He first prepares a moist protocarbonate of iron, by mixing together solutions of sulphate of iron and carbonate of soda, precisely as directed for Vallet's ferruginous mass, and washing with sweetened water. This is then dissolved by means of a slight excess of citric acid in water, and evaporated to dryness. A greenish, deliquescent, freely soluble, uncrystallizable salt results, the taste of which is ferruginous, but not very unpleasant. To make the syrup, one ounce (troy) of this salt is dissolved in five fluid ounces of simple syrup, which is easily effected, and forms a dark greenish-brown liquid. The dose is from thirty drops to a teaspoonful. The syrup of citrate of iron of Beral is a saccharine solution of the citrates of ammonia and sesquioxide of iron.—*Journ. of Pharmacy*.

U. S. Naval Surgeons.—A Board of Naval Surgeons will assemble at Philadelphia, October 25th, for the examination of candidates for admission into the Navy as Assistant Surgeons. Persons who are twenty-one, and not over twenty-eight years old, desiring to appear before the Board, can receive permission by making application, accompanied by proper testimonials, to the Secretary of the Navy.—*Washington Union*.

Formula for the preparation of the Ethereal Solution of Gun Cotton.—We have found considerable difficulty in preparing the gun cotton in a state to ensure its solubility in sulphuric ether. Our experiments would lead to the conviction, that the finest quality of gun cotton, which we have had no difficulty in preparing, is soluble, or nearly so, in that liquid. A gun cotton, of ready solubility and easy manufacture, may be prepared as follows: Take of nitric acid, sp. gr. 1.350 (the ordinary sp. gr. of commercial nitric acid) \bar{z} ij.; sulphuric acid (commercial) \bar{z} iv. Having mixed the acids in a glass vessel, stirring them with a glass rod, add immediately, of freshly carded cotton, \bar{z} ij. ϑ ij., and digest for the period of fifteen minutes. The acid is now to be poured off the cotton, and the latter washed with water until litmus paper is not affected. The cotton is to be finally squeezed between the folds of a clean towel, to remove as much water as possible; teased out, and finally pressed between sheets of blotting paper, until quite dry, and instantly thrown into

rectified sulphuric ether. The quantity of gun cotton thus formed is sufficient for about a pound of ether. It should form a transparent, colourless liquid, somewhat of the appearance of thin mucilage.

Brit. and Am. Journ. of Med. Science.

Spontaneous Cure of an Ovarian Tumour.—In one of the sittings of the Société Medico-pratique of Paris, a case of encysted ovarian tumour, of several years standing, was brought forward, which disappeared in a few days, after very considerable micturition. M. Dobbigny, who attended the lady, (of middle age,) asked the Society for the solution of the problem, whether the cyst opened into the bladder, or was merely effused into the peritoneum, absorbed and carried off by the kidneys. He gives no other symptom but a feeling, expressed by the patient, as if some liquid were falling drop by drop into the cavity of the abdomen. Another member mentioned a similar case which had occurred in his practice. We do not find that any of the members present gave an explanation of the phenomena, nor was it very easy to do so, considering the imperfect account of symptoms given.—*Med. Times.*

Placentitis Occurring Twice in the same Woman.—Dr. Van Hengel attended a woman, thirty-three years of age, who was delivered of a child, of whose death there had been distinct signs three weeks previously. The fœtal portion of the placenta had degenerated into a greyish-white colour; on the uterine surface it was still spongy and porous in several spots. Two years afterwards the woman was again near the time of her delivery. She stated that between the seventh and eighth month she had had a slight attack of fever, after which she was seized with severe pain in the right side of the abdomen, in which part she felt as if there was a weight lying within her; at the same time she suffered from thirst, sleeplessness, headache, and loss of appetite. Subsequently she was troubled at various times with bloody, watery, and purulent discharges from the vagina. The pulsation of the fœtal heart could not be heard, nor could any movements of the child be felt by the mother or her medical attendant; and at the same time she complained of nausea and a sensation of cold in the belly. Some days after, she was delivered very quickly of a child which appeared to have been long dead. The placenta was circular, curled inwards at the edges, greyish-yellow in colour. On the fœtal surface it was dark-brown or almost black; and it was so indurated as not to bend when held out by one point.—*Ibid.*

A New Remedy for Toothache. The Principle Agent being Chloroform.—Mr. James Beatson, of Airdrie says,—“Gum copal, when dissolved in chloroform, forms an excellent compound for stuffing the holes of decayed teeth. I have used it frequently within the last two weeks, and the benefit which my patients have derived from it has been truly astonishing. The application is simple and easy. I clean out the hole, and moisten a little cotton with the solution; I introduce

this into the decayed part, and in every instance the relief has been almost instantaneous. The chloroform removes the pain and the gum copal resists the action of the saliva, and, as the application is so agreeable, those who may labor under this dreadful malady would do well to make a trial of it."—*Ibid.*

Vomiting caused by Relaxation of the Abdominal Parietes cured by a bandage.—M. Greppo reports the case of a woman whose abdominal parietes were much relaxed in consequence of repeated pregnancy, and who was troubled by habitual vomiting, which resisted all the ordinary remedies. An abdominal supporter bandage was then applied, which entirely relieved her. When, however, she neglects to wear the supporter, the vomiting returns.—*Med. Times.*

Irritable Bladder from Tape-worm. By Mr. TUFNELL.—A man of temperate habits complained of excessive irritability of the bladder, with difficult micturition. His health has been good till three months previously, when he began to suffer from dyspepsia, with irritation of the rectum and hemorrhoids. These symptoms increased, and to them were added tenesmus, and frequent calls to make water, which was voided in a twisted jet, and accompanied by severe straining, but no pain. The urine was highly acid, and loaded with lithate of ammonia. The prostate was of natural size, but very sensitive to the touch. His symptoms were twice removed by appropriate treatment, but he returned a third time, suffering severely, and anxiously desiring an operation for his relief, being convinced that he suffered from urinary calculus. The irritation about the anus had now greatly increased, and he was observed at the same time to be frequently rubbing his nose, which led to the suspicion of worms in the intestines. A purgative of turpentine and castor-oil was administered, and the following morning a tape-worm, measuring thirty feet, was evacuated. The patient obtained immediate relief from his distressing symptoms.—*Dublin Medical Press.*

Danger of Repressing Skin Diseases.—Several instances have occurred in the practice of M. Devergie, illustrative of the danger which may arise from the repression of chronic cutaneous affections. The reporter of the cases sums up as follows: 1. The functional disturbance of the internal organs occurs simultaneously with the subsidence of the skin disease. 2. The severity of the symptoms is proportionate to the extent and severity of the skin disease. 3. The symptoms cease on the return of the cutaneous irritation. 4. Death may occur more rapidly than from similar internal disease produced by other causes. 5. If the internal disease be treated antiphlogistically, death is precipitated, and a fatal result always ensues if the eruption cannot be restored, or an artificial one excited.—*Lon. Med. Gaz., from Gaz. des Hopitaux.*

Greatest ascertained Depth of the Ocean.—On the 2d of June, when in latitude $15^{\circ} 3'$ south, and longitude $26^{\circ} 14'$ west, being nearly calm, and the water quite smooth (says Sir James Ross), we tried for, but did not obtain, soundings with 4600 fathoms of line, or 27,600 feet. [Very nearly five miles and a quarter.] This is the greatest depth of the ocean that has yet been satisfactorily obtained. Its determination is a desideratum in terrestrial physics of great interest and importance.—*Lond. Med. Times.*

The use of Nitrate of Atropia for producing Dilatation of the Pupil.—Dr. Jacob remarks that, for application to the conjunctive, the solution of atropia, or some of its salts, is much more effective and convenient than any extract or tincture of belladonna. He has found that a single drop of a solution, made by dissolving two grains of nitrate of atropia in an ounce of water, dilated the pupil as perfectly, if not more perfectly, than the best extract of belladonna. It produced less pain and irritation, and was not attended with the inconvenience of leaving a string of green coagulum between the lids. *Dublin Med. Press.*

Accidental Poisoning with bad Calomel in France.—Calomel is much used in this country, and we are happy to find that the absence of accidents caused by this salt evidently point to the care with which the bi-chloride is separated from it. A gentleman has just fallen a victim in France to the faulty preparation of calomel. His physician ordered twelve grains of the salt (prepared by steam) to be suspended in a gummy emulsion. One spoonful was to be taken every hour. The first spoonful produced an alvine evacuation, the second, dejections of large quantities of mucus, then followed a frightful convulsive fit; a third spoonful confirmed the convulsions, and the next day, at twelve o'clock, the patient was dead. The whole mixture was immediately analyzed; it contained no less than from three to four grains of bi-chloride of mercury. Fifteen grains of the calomel taken from the establishment of the chemist where the mixture had been prepared, gave the same relative results. A very simple way of testing calomel, among the many which are in use, is to place a little on a well-scoured sheet of copper, and then treat it with ether. On rubbing the metal slightly on the point where the evaporation is taking place, a brilliant amalgam is formed. This is enough to show that the calomel contains a soluble salt of mercury, that it is poisonous, and ought to be rejected.—*London Lancet.*